

DIGITAL SUPPLY CHAIN

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Chapter 1 – Introduction

The Digital Supply Chain is another media term which envelops the course of the conveyance of digital media, be it music or video, by electronic means, from the starting place (content provider) to destination (buyer). In much a similar way an actual medium should go through a "Supply Chain" process to develop into a consumable item, digital media should go through different stages in handling to arrive at a point in which the consumer can enjoy the music or video on a PC or TV. Any organization that is answerable for making, storing, handling, managing, and distributing media is a major part of the Digital Supply Chain.

Chapter 2 – Components in a Digital Supply Chain

2.1 Content Provider

The Content Provider gives the actual content that will at last be used by the end-user. The Content Provider gives the content in an assortment of arrangements - including film, tape, CD, DVD, hard disks and digital files.

2.2 Capture

If the content given by the content provider isn't in a digital format, it should initially be changed over to an digital format.

On account of film or tape, this is regularly called the "capture" process in which equipment will play back the first medium and "capture" its contents and convert it into a digital format. This captured record is regularly captured at the most feasible quality as it goes through different cycles that could lower the quality. Subsequently, the most possible capture is constantly desired.

2.3 Compression

The captured digital file is frequently very large, requiring a lot of digital storage space and difficult to convey to the consumer through broadband techniques. Therefore, it should be compressed in a process called encoding or transcoding.

In this cycle, a codec is utilized to compress the captured digital file into a format which is adequately little to be delivered to the end-client, through broadband techniques. This encoding system involves thought of numerous factors with respect to how the file is to be compressed. For sound, this typically comprises of bit-rate and sample rate. Extra factors for video include resolution, frame rate and furthermore has its own bit-rate that should be indicated.

These factors are determined by how a specific file is to be devoured; download, streaming to a PC, streaming to a cell phone, etc.

Quality, in any case, frequently turns into an issue at this stage and great consideration is taken to guarantee the quality of the medium is of the greatest possible quality for its planned delivery technique. For instance, a video encoded for streaming to cell phones requires a lot more higher level of compression than would for a PC download, so the nature of the video won't be close to as great.

2.4 Ingest

Ingest is the stage wherein the compressed file and metadata are placed into the digital asset management system. It isn't required for the metadata and the compressed media document to be ingested into the system simultaneously, however, there will be a point in the entire process where both have been ingested into the system and the metadata can reference the media record.

2.5 Quality Control

Quality control is needed to guarantee that a file has been encoded appropriately, with the ideal outcomes and is liberated from corruption. Media should be examined to guarantee it follows every single specialized prerequisite (for instance, a particular delivery format), just as every content necessity (in the event that it will be circulated in a district that limits specific imagery) how much a file is considered acceptable, depends either on the prudence of the party charged of encoding the content, or a particular standard characterized by the content proprietor for which the encoding party should go along.

Quality control need not just occur at this juncture. Most organizations managing the digital supply chain will expose the media to scrutiny of the quality control process at different stages including: original capture, post-compression, post-ingest and post-distribute, along these lines guaranteeing the media has not become bad or has not been degraded unfortunately during any phase of the interaction.

2.5 Digital Asset Management

The Digital Asset Management handles the metadata, content and their connected assets, for example, album cover and movie poster art. It is generally expected the digital asset management systems which additionally handles the distributing of the actual content to a digital storefront. Some digital asset management systems explicitly worked for the digital supply chain and the conveyance of electronic media will follow the progress of content as it goes through the digital supply chain. A decent digital asset management system ought to likewise incorporate reporting devices which can report back on the situation with different parts of the digital supply chain itself.

2.6 Metadata Entry

Metadata is the data that recognizes and depicts the contents of a medium. This data can incorporate media-explicit data, for example, Title, artist(s), production organization, occasional/episodic depiction, original release date, and so forth. Metadata can likewise incorporate business-related data, for example, price estimating and availability.

Metadata is added as media moves all through the supply chain, updating organizations on where and how the media began, and how it came to its current point.

There are 5 sorts of metadata recognized by the US National Institute of Standards and Technology. Descriptive metadata, the technique in which clients can find content by the utilization of components including title, description and catchphrases is commonly the most familiar.

In addition to descriptive metadata, the 4 different kinds of metadata have expected more prominent significance given the intricacy of transmission operations. These types of metadata include: structural metadata, where the development of media and communication among applications and databases can be controlled; administrative data; rights management metadata; and library and conservation metadata.

2.7 Digital Rights Management

Digital Rights are an important aspect of digital supply chain, it reduces the possibility of media being pirated. It is the process of encrypting the content so that it cannot be played without proper license which one can get by buying a subscription or purchase of the content.

2.8 Content Delivery Network

After ingesting the media files, they are hosted and broadcasted by a content delivery network, which is abbreviated as CDN, which is capable of delivering the data to end-client. Also, the CDN should be able to support the number of expected customers.

2.9 Merchant/Storefront/Digital Retailer/Digital Service Provider

The content will at last show on a digital storefront where the buyer can see a list posting of the contents and access the substance by buying, membership or other technique a dealer has chosen for to make the content accessible.

Chapter 3 - Conclusion

From the research made, I can conclude that every supply chain including digital supply chain is as per the following cycle,

Manufacturer -> Distributor -> Retailer -> End-user

Digital supply chain consists of numerous processes before the product is handed over to a distributor, like ingesting, quality control etc. Every product in the digital supply chain is protected by Digital rights so as to make sure that no piracy of the product is made.

All the products are made available to the end user in a storefront or in a digital service via payments or subscriptions.

Chapter 4 – References

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