Why Object Storage Will Become a Strategic Building Block of the Film- and Music Industry

By Dirk De Boeck
April 2022

Say what?
How many new releases per day?

An average music fan wakes up on an average Saturday morning. She turns on her favorite music streaming app and wonders when the new album of her favorite artist will be released. After all, yesterday was a Friday, the day most artists release their new tracks on Spotify, Deezer, Tidal, Beatport, or any service for that matter. However, since the introduction of streaming music, release dates of new music have become a moving target. Traditional musicians still go for a Friday. But lesser gods who want to avoid their album being released on the same day as for example top chart breakers like Lady Gaga or Ed Sheeran will most likely opt for another day of the week.

Every day, over 70.000 new songs are released on streaming platforms. And that's only the consumer part of it. For the professional musician, aiming at having his or her music in a new Netflix film or a Discovery Channel documentary, additional platforms exist. These aim at linking providers of music to producers of films and vice versa. But how do film producers find the right music for their next movie in this gigantic, ever-growing jungle of audio productions. After all, every musical track easily comes with 5 to 10 remixes or special versions, depending on which part of a scene it should support. There are large companies out there, offering catalogues of millions online previews of audio material. Some of them are for amateur producers, let's say weekly developers of video blogs in YouTube. Others are for the more professional production house creating corporate advertising or even popular TV series on Netflix, Apple TV or Amazon. So how do they find that perfect audio track with that perfect piano solo for that perfect sunset scene? After all, you have a collection of more than a million files to choose from? And is it even technically possible without having to listen to thousands of recordings just to find that one thing you need? The answer is yes.

Media music libraries such as Envato or Pond5, developed specifically for the film and video industry have become mainstream. The market is becoming saturated. A staggering 20 million media files are available instantly. Their number are rising so rapidly, it has become a burden finding your way in an ever-growing supply.
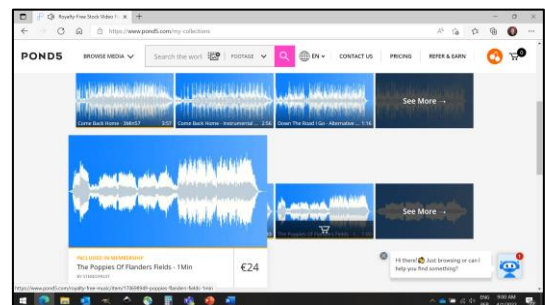
Search results based on matching criteria in over 500.000 online audio files.

The power of keywords and metadata

A few weeks ago, I had a chat with an independent filmmaker, based just outside of London. He had just wrapped up the selection process for the music to be used in his new nature documentary. For a 42 minute episode, that process used to take weeks to complete. 15 years ago, you had to talk to publishers, composers, studios and agents. Since the existence of music libraries however, filmmakers can simply go online, visit their favorite subscription based stock music library, preview any song they want, download it and that's that. If you're not too unhandy, and you know how search engines work, you're all set to clear the job in one day. So how does it work?

The secret is in the use of keywords ad descriptions. When you enter the online catalogue of stock music libraries such as Pond5, MotionArray, Artlist or Audiojungle, just to name a few, a film producer can immediately narrow down his selection using keywords. Professional musicians already described each one of their songs using words like soft, inspiring, uplifting, calm, orchestral, solo violin, or any other type pf meta keywords they deem relevant. That selection can then be narrowed down again based on elements such as
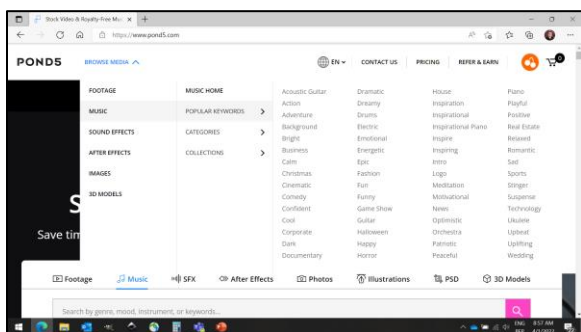
the speed of a song, type of instruments used, and even pre-filled usage cases such as documentary, sunset, action scene, battle music or suspense. You name it. The selection becomes smaller and the focus better, instantly. Any type of description which may help a film producer find the right track is acceptable. Top it off with full phrase descriptions per audio file such as for instance "can be used for news footage about conflicts in the Middle-East" and you start to get the picture (no pun intended).

The technological solution behind so much intelligence is not new. Since the early days of the internet, search engines and keywords have been commonplace. However, with the recent introduction of enhanced data storage techniques like "object storage", headaches about finding back files in mass storage systems of uncatalogued data have become a thing of the past. In the example of huge audio data collections, each recording (even the variations) are stored together with their metadata and descriptions in a very pragmatic way. File based storage is not powerful enough to allow fast and thorough search capabilities which can handle millions of files. That's why in this case, object storage is the way to go.
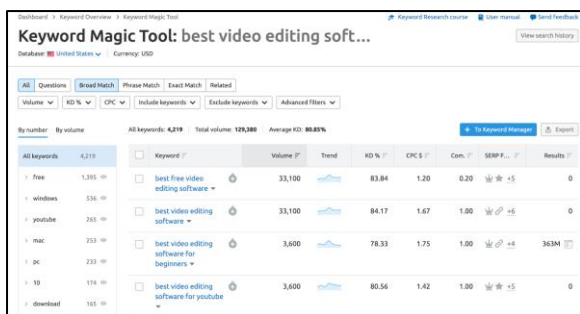
Storing unstructured data such as music, media or text without a distinct or clear structure behind it requires metadata. Furthermore, these files will most likely not be changed often, or not at all, making them perfect for object storage solutions. Netflix and Spotify have already embraced this technology, and it works perfect.

Search engines create business value. The faster a customer finds the audio file he needs, the faster he will create business revenue.

Specialized tools exist for Youtube content creators, assisting them to appoint the right keywords to their videos in order to maximize their chances of getting listed in search results

New markets attract new bandits

For these new media brokers and music libraries, their search capabilities, interactive applications towards both musicians and film producers are critical. And a company with a massive amount of data becomes a nice target for hackers and ransomware gangsters. Media companies and libraries will want their business critical environment to be always available, up and running. In the event of, let's say a successful ransomware attack, the media library will want to be able to restore its files in a version before they got encrypted by the malware. Object storage, by default, makes files immutable once they are injected into the storage system. An immutable object is an object whose state cannot be modified after it is created. So when a file gets infected and encrypted by a hacker, the original file remains intact, and the virus is forced to create a new version. In 2021, Israel based Artlist acquired US based MotionArray for no less than 36 million USD. There's a lot of money involved in media libraries, so their data better be protected and safe at all times. This where object storage offers unique opportunities.

Westpole and object storage

Media files also become larger and larger. With the introduction of 4k video and high resolution audio solutions, data has exponentially grown along with them. Where an average mp3 song is about 3Mb, an average professional media audio WAV or AIFF file quickly amounts to 70Mb or more. To put things in perspective, the IT industry expects the amount of data around the world to grow from 80 Zb to over 200 Zb by 2025 (1 Zb, or zettabyte, is 1 trillion Gb or gigabyte). At the current growth rate of music releases per day, that part alone will create about 40 million new media files per year both in streaming and in media libraries. That means current storage solutions based on NAS technology or similar will not be effective enough to support the growth. Object storage can be a fantastic solution for storing all types of date, structured on un-structured.

The media industry is well aware of the evolution of data volumes involved. Its proposition is more and more based on IT technology, and innovative operations have become mainstream, from streaming applications, all the way to enterprise grade media brokerage. At the end of the day, the technology behind object storage is identical in any industry. This is why Westpole have decided to invest further in their capabilities and knowledge around object storage.

WESTPOLE offers object storage services and solutions, ranging from advisory services all the way to full operational datacenter services. Our solution is set up with redundancy in mind. Customers can send data to our object storage environment over the Internet via redundant connections.

Our experts can bring pragmatic cases to the table regarding immutable technologies, for storage requirements with a heavy legal footprint as well.

The four datacenters in Belgium and Luxemburg are interconnected with our private dark fiber connections.

WESTPOLE has signed a strategic partnership with object storage specialist CLOUDIAN. More information is available on our website and in a series of dedicated vlogs, specifically covering this subject. (www.westpole.be)

About the author:

Dirk De Boeck is Director Managed Services Benelux at Westpole. In his spare time, he writes and produces film music and audio compositions for media. Since 1998 he also has a publishing contract with Universal.