jims
Sector-5, Rohini, Delhi

STUDENT PRESS

IT KALEIDOSCOPE

APRIL 2019

DIGITAL TWIN IN THE INDUSTRY 4.0

The common phenomenon depicted in sci-fi movies about people having their own doppelganger that lives in an alternate dimension, today, is turning into a reality. Admittedly, it sounds like some crazy fantasy however, if we put Hollywood aside, this concept is real and is called -Digital Twin Technology. Digital Twin is not a new concept. In fact, this term has been around for some time now and has grown from a mere idea into a technique meant for businesses to monitor their resources. Recently, however, it has shifted its focus. So, let's learn about this technology a bit more and find out how it is transforming with the emergence of Industry 4.0.

Digital Twin is a virtual model of a real product, process or large systems that have an ability to monitor, analyze and improve its performance. The model is created using computer-based engineering and is incorporated with Big Data Analytics, AI, Machine Learning and Internet of things. A virtual prototype of the object is formed from the real product that is "live" and "dynamic" in nature, meaning it is updated every time its physical twin undergoes changes. The prototype is also able to learn to absorb the knowledge from people, machines, and the surroundings it exists in. In essence, the digital twin is about connecting the physical world with the virtual world through data and information. So, it's no surprise that Industry 4.0 has made the digital twin more realistic for manufacturers. Advancements in digital technologies, including Big Data, machine learning, and the ability to integrate operational technology is making the digital twin scenario possible.

Also, the wide-ranging reach and usage of the IoT have made the Digital Twins more cost-effective and accessible for the business world. Since its beginning, digital twins have undergone a significant evolution, once restricted to the product lifecycle management (PLC) space and to the single entity; it has now the potential in various sectors such as manufacturing, automation, retail, engineering, healthcare etc.With Digital Twin, an operator can get trained on a virtual machine without spending for a dedicated

With the further evolution of Machine Learning and Artificial Intelligence,it won't come as a suprise if machines take the autonomy to the next level in the future. In such an autonomous world of industrial machines, the role of Digital Twin will evolve, and we will witness an increasing self-awareness in machines. Such machines will be capable of optimizing its performance, coordinating with other machines, doing self-diagnosis and self-repairing of the faults, if any, with minimal intervention from a manual operator.Certainly, an exciting future awaits us in the world of Manufacturing and Engineering with Digital Twins being a significant step to it.

- NIMISHA SHARMA, BCA II YEAR

THEME: THINK TANK

PROGRAM INCHARGE
Dr. PRAVEEN ARORA

FACULTY COORDINATOR
Ms. PRIYANKA GANDHI

EDITOR
KIRTI BHARDWAJ

WRITERS
KUSHAGRA GUPTA
NIMISHA SHARMA
GURJEET SINGH

GRAPHIC DESIGNER
KIRTI BHARDWAJ

jims
Sector-5, Rohini, Delhi

STUDENT PRESS

IT KALEIDOSCOPE

APRIL 2019

THEME: THINK TANK

YOUTUBE - A HYBRID

When introspecting emerging and established businesses, YouTube is one such online video streaming platform that stands out from all other successful IT ventures. And surprisingly for the last month I have been thinking about YouTube's success and its origins since it's hard to believe that it just came into being as a blessing in disguise and achieved the success it has today. In reality, YouTube's business tactics and how it became the business brand it is today is much more complicated than that.
Focusing on its workings, let's say, footage of over 300 hours is is uploaded on the platform every minute, most of which you may argue, may be just camcorders footage that is often pretty low quality material. This 300 hours worth of video in just 1 minute or 60 seconds is an indication to just how much of storage maintenance and up gradation YouTube has to undertake which undoubtedly is very costly that further pops up the question - when was the last time you paid to watch a YouTube video, except for movies and premium content? And if not from its users, where is YouTube getting its resources and revenue from?
Part of the answer lies in YouTube's roots itself.

And this picture above is your correct answer if there was to be a one-word answer, which it is not.
So this picture, as some of you might know is actually the snapshot of the very first video uploaded on the YouTube platform titled 'Me at the Zoo', and this man is not just any random person, he is one of the 3 founders of YouTube itself - Jawed Karim . The 3 initial founders, started out to develop a dating site but luckily that venture turned into a video sharing platform.
But that doesn't really make any sense because 'idea is nothing more than trash'. Take my words for it if not Edison's. So, perhaps keeping this mantra in mind and not giving much thought to the future, these (now) entrepreneurs implemented the idea as soon as possible. The best thing about the future, though, is that it is unpredictable and sometimes with the course of time 'SOMETHING' always happens to businesses which give them a better shape and direction. And if that 'something' may not have happened to YouTube, it would have continued to be another 'A' curve start up - rising sharp and falling sharp. This 'something' made YouTube a 'J' type start up which may decline at start but promised only rising revenues later.
And that 'something' is nothing but Google acquiring YouTube from the 3 initial founders for mere $1.6 billion.
Here's the thing, YouTube is backed up by a unique type of business model, which may demand quite a lot of investment at the beginning but when supplied with correct nutrients such as Ad-sense- putting not only ads but SMART ADS specially tailored for everyone, and revenue share cuts with 'content creators' which is how YouTubers can monetize their YouTube channel and earn real money say, roughly $1 per 1000 views, with the catch being YouTube acquiring 45% of the total revenue which is, in fact, the real answer to the original question.

This is the reason why YouTube has turned out to be one of the best and unique platforms that it is now with some of the other advantages it has reaped which align with the 'luck' factor including Smartphone revolution and JIO, for example.

Google being the tech giant it is already had these nutrients ready to be injected inside the YouTube model, making it 'The Hybrid' of all the other social media platforms.
In other words, Google has not only made the Hamster wheel for YouTube but also outstandingly and unknowingly inserted you – the general user into the same wheel. But, the good thing is nobody is getting tired, EVER.

- KUSHAGRA GUPTA , BCA I YEAR

FUN FACTS

• Almost half the world's population has never made a phone call.

• The first commercial text message was sent in December 1992.

• The Comic Sans font is widely known as the world's most hated font.

• The word "Android" means a human with a male robot appearance.

•The 30th of November is known as "Computer Security Day".

• The QWERTY keyboard was designed to slow you down. If you want to type faster, try the Dvorak Keyboard.

• The world's largest hard drive is a 60TB SSD..

•Windows OS original name was "Interface manager".
+
•You cannot reverse a Bitcoin transaction, or be forced to pay.

•People who are using a computer blink 66% less than those who aren't.

- GURJEET SINGH
MCA