AMRUT E-LEARNING: OFFLINE OTT (OVER THE TOP) PLATFORM FOR DELIVERING EDUCATIONAL COURSES

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Abstract - In this paper we involves the development of an offline OTT platform that utilizes a Raspberry Pi to deliver educational courses. With its customized media server and admin console, the platform is designed to be user-friendly and cost-effective. The offline capability of the platform makes it ideal for areas with limited internet access, providing an opportunity for students to access educational content without any restrictions. Through the use of Raspberry Pi, the platform is energy-efficient, reducing the environmental impact of traditional servers. Here we develop the project to improve access to education, especially in rural and remote areas, and provide an affordable solution for educational institutions seeking to deliver courses in offline settings.

***Key Words*:** Offline OTT platform, Educational courses, Raspberry Pi, Media server, Admin console, User-friendly.

1. INTRODUCTION

The OTT(Over-The-Top) media platform is a digital media service delivered directly toaudiences without the Internet. The companies that historically serve as controller distributors of such content, such as cable, radio, and satellite television channels, are bypassed by OTT. It's also been extended to no-carrier cellphones, which bill all communications as data, preventing monopolistic competition. OTT also refers to a new generation of modern television networks that, like conventional satellite or cable TV providers, offer live streams of linear specialty channels over the public Internet rather than a closed, private network of proprietary equipment like set-top boxes. In this paper, a study is conducted on the consumption of these OTT platforms among youth. A media server delivers video and audio content to clients who request it. The term is used to refer both to a software application that performs this function and a host that's running the media server software. The most common use of media servers isprobably to deliver video on demand (VOD), in which the media server retrieves prerecorded video content from storage and delivers it across the Internet. The Raspberry Pi can be used asa web server on your main local network or the internet at large. It is a great selection in cases where you want an intranet for the office or a web development server. You can create a local Pi webserver to deliver various contents while you are surfing the internet. The available literature suggests that OTTs have had a deep impact on the media 2 entertainment, telecom and the IT sector. While multiple factors have contributed to its growth so far, players have still scratched the surface when it comes to exploring the potential of the Indian market. The C OVID-19 pandemic occurrence gave an impetus to the adoption of OTT in India at a national scale including urban and regional markets alike. Similarly, the big fight between existing players is leading to revamp of regulations, marketing formats and advertising on the platform.

2. CASE STUDY

Challenge:

An educational institution in a remote area of a developing country faced significant challenges in delivering educational courses due to the lack of reliable internet connectivity. The traditional method of delivering educational courses was not a viable option due to limited access to the internet, which left many students unable to access educational content.

To overcome this challenge, we decided to develop an offline OTT platform using Raspberry Pi. The platform included a customized media server and an admin console for adding courses. By leveraging the low-cost and energy-efficient capabilities of Raspberry Pi, the institution developed an affordable solution that could be deployed in areas with limited access to the internet. Users could access the content in the app without an internet connection.

3. Offline OTT Architecture

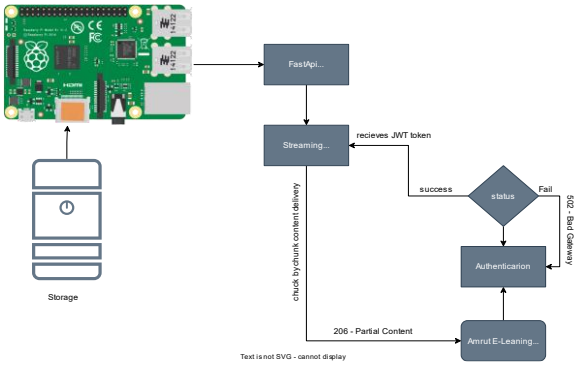

Fig -1: Offline OTT Architecture

4. APPLICATIONS:

- For educational purposes, students can consume educational content for free without the internet.
- In airplanes where an internet connection is not present.
- In railways System.
- We can implement it on ships.
- Enable individuals without reliable internet connections to access educational content at their convenience.

5. CONCLUSIONS

Our project to develop an offline OTT platform for delivering educational courses using Raspberry Pi has proven to be a successful and innovative solution. The platform's low-cost, energy-efficient, and user-friendly features make it an ideal solution for institutions and individuals in remote and underdeveloped areas, enabling them to access educational content without any internet connectivity restrictions. We can watch content multiple times without consuming any additional data or without worrying about high data costs.

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