

Success Story

Reengineering a legacy media streaming application



GoKonnnect

Client:

GoKonnnect Interactive Media

Industry:

Entertainment

Country:

Nigeria

Our Role:

Product Engineering

About the Client

GoKconnect is a distinctive software suite that distributes free video content to passengers in local transportation. The passengers can view content without any latency as streaming media is downloaded by the router application and is stored locally on the router.

There are 300 active routers on local transport in Nigeria and have over 30,000 registered users.

Key Facts

40%

increase in new visitors

60%

faster loading speed

3x

faster release cycle

Services Used

 Software Re-engineering

 Software Consulting

Technology Stack

-  Laravel
-  React Native
-  MySQL
-  OpenWrt
-  DLNA



The Situation

GoKonnnect aims at increasing internet usage among the people of Nigeria where the internet penetration rate stands at an estimated 47.1%. In order to encourage citizens to adapt to the internet, GoKonnnect launched a public media streaming mobile app. This app provides entertainment services to passengers in public transport or locations. These transport vehicles are equipped with media routers (produced by GoKonnnect) to deliver video content over wi-fi.

However, the current software suite lagged management capabilities for media content and needed enhancements for improved customer experience. The existing mobile app was built using a legacy technology stack, which was a major hurdle in boosting the app's performance, providing a better user experience, and increasing scalability.

GoKonnnect reached out to team Daffodil for revamping their mobile app with new technology that could support cross-platform development and helps in improving app performance. The key requirements were to:

- Reengineer their mobile app with React Native technology, a mobile development framework by Facebook which supports scalable, cross platform app development using reusable components.
- Migrate the backend CMS that was built using the LAMP stack to a newer technology stack in order to boost scalability and 3rd party application integration.
- Redesign the entire UI/UX of the application as it was hampering the overall user experience.

The Solution

Team Daffodil analyzed the existing app features, functionality, and the challenges associated with it. Identification of stakeholders, report metrics, integrations with the app, technologies & architecture (and how much changes are required), etc was done before starting with the process. There were scalability and load balancing issues that needed to be fixed along with the other changes. Team Daffodil divided the requirements into two development milestones and proceeded with Agile methodology (Kanban & Scrum) for app development.

Team Daffodil revamped the entire mobile app using React Native technology. Along with the improvement in UI, major updates were done to enhance the user experience.

- The presentation and structure of the apps were changed so that users can find the media they are interested in. A custom media player was developed with an improved search that helps to find media by searching through metadata.
- The user authentication process, which earlier used the captive portal and required users to fill a form to login was simplified. Easy login to the platform is supported with or without GSM connectivity.
- From an end-user perspective, a number of updates were made in the app, which includes resuming video after switching the router, in-app notifications for communication, one-time registration to use the app, etc.

- Earlier, the router could accommodate only 4-5 users and it started to hang thereafter. Team Daffodil had to work on this limitation of the suite and ensure that with the same RAM, the router should take a load of 25 users at least. This was achieved using the MiniDLNA server (a media

In the previous suite, there was no media server deployed which could manage the load of the PHP server. MiniDNA performed this job and ascertained that APIs are not affected, the load is distributed, and the CPU task is reduced. The Server is hosted on OpenWRT Operating System which is a Linux-based system, especially meant for embedded devices like media routers. OpenWrt reduces latency and increases network throughput via buffer bloat control algorithms.

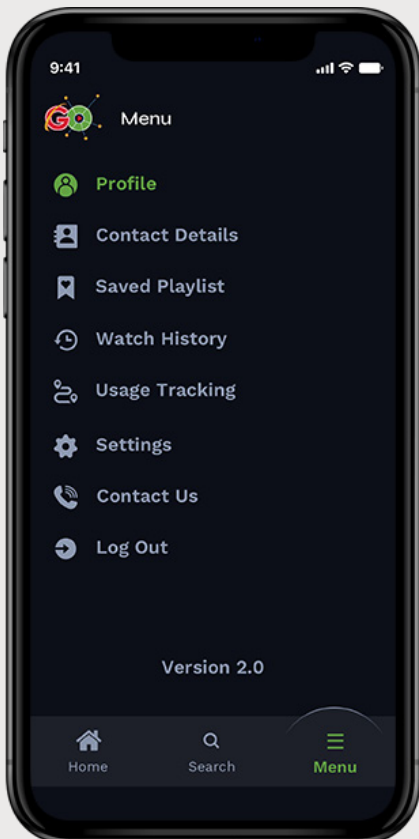
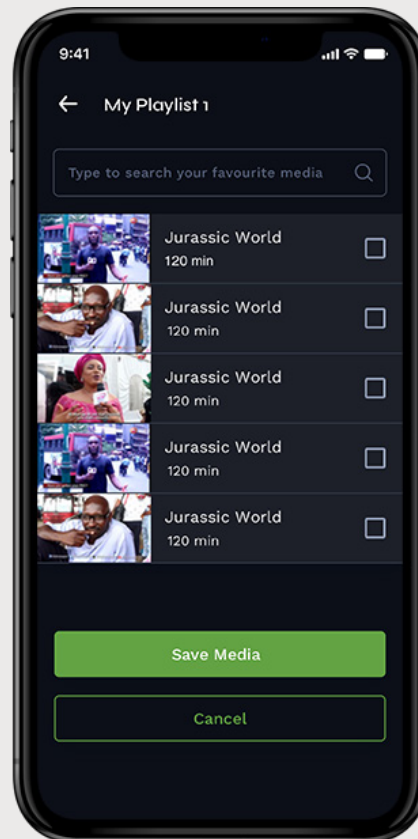
The Impact

Team Daffodil's on-time delivery, consultations, and quick problem-solving made the project a success not only for business owners but consumers as well. The mobile app and the backend collaboratively make a strong solution that allows users to view videos without latency. Moreover, to make the services more reliable and accessible to all, features such as usage limitation, flexible report changing, ability to watch media without internet connection, etc. were added to the application in consecutive releases.

The backend was revamped using PHP Laravel. Since all the APIs were developed for communication with the app built on Delphi technology, the team had to develop all the APIs again. The admin panel gives a bird' eye view of how advertising is done, provides router details, manages roles and privileges, allows mass mailing, and more.

Since advertising is the core business model of GoKonnnect, they wanted a complete view of what's happening in the background. The admin panel allows checking the total number of active/inactive users, list of new users, age, etc. It also provides a media dashboard (media viewers, playcount), router dashboard (active routers, average uptime, updated router), banner advert (totals, ad impression, clicks), track users/bus by location, etc.

Product Screenshots












About Daffodil

For more than 20 years, Daffodil Software has been a trusted software technology partner to organizations across the globe. We take pride in our ability to look beyond technologies & deliver innovative solutions.

Daffodil is a CMMI level 3 accredited organization with innovation, tech agility & process orientation rooted deep within the core. Our team of 1000+ technologists strive to shape the tech industry and help businesses elevate their value proposition through technology.

Technology Partnerships & Certifications

 <p>Microsoft Partner Silver Application Development partner</p>	 <p>Google Cloud Premier Partner</p>	 <p>aws partner network</p>
 <p>Microsoft Partner Silver Collaboration and Content</p>	 <p>UiPath Partner Robotic Process Automation</p>	 <p>PubNub</p>
 <p>ISO 9001:2015 CERTIFIED COMPANY</p>	 <p>ISO 27001:2013</p>	 <p>ISO 20000 International Organization for Standardization</p>

Awards & Accolades

 <p>Deloitte. Technology Fast500 APAC Winner</p>	 <p>ITEUROPA EUROPEAN IT & SOFTWARE EXCELLENCE AWARDS</p>	 <p>zinnov ZONES</p>	 <p>Great Place To Work Certified INDIA</p>
 <p>mobilewebaward 2020</p>	 <p>INDIA'S MOST ADMIRABLE BRAND 2020 READER'S CHOICE</p>	 <p>CMMI level 3</p>	 <p>THE ECONOMIC TIMES Best Tech Brands 2021</p>

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