Project Transmitter

1. Description and Aim

The project is called “Project Transmitter”. The aim of the project is providing a simple place for users to receive various amount of data that vary in type and size. Users will be able to subscribe to servers and those servers’ services with a Flutter application to receive their desired data. The data may contain various type of material such as texts to represent news article, a new tweet, sale prices or announcement from a website. That being said, shared contents are not limited with texts, also files could be shared.

Topologic pattern is based on not only a server-clients relationship but also peer-to-peer connections for establishing a better workload distribution and user experience. User has freedom of choosing to be a “leecher” or a “seeder”. The servers will be independent and deployable by anyone, thus the application owner could avoid possible legality issues and service range got increased easily (Aka Scaling and Flexibility Buzzwords). The server owner could decide what to do according to user behaviors.

The deployable servers will have layers of contents, limitations and features. With respect to contents, a server could has multiple services that serving the user with different kind of contents. A user has to subscribe to these services and server to be able to get notifications and desired contents. A subscription means the user gets access to desired content, user accepts the server’s use of conditions etc. and might submit personal credentials. Limitations are up to the server owner which could be a condition to use of service is setting being a “seeder” as a must. Last of all, the features, a custom Push Notification Service will be developed for server side. This feature may be a hardcoded implementation or a completely different server side project. Hardcoded is preferred, it is always easy to migrate to another server than having to develop another server side project. Another thing is that, a tracking system is needed for p2p connections between devices.

The server will control all components, databases, communication protocols, tracking users, push notification service, p2p tracker system on the same machine. On server side, C++, libcurl (a C++ binding) for networking, WSL (Windows Subsystem for Linux) to build cross platform with efficiency, SQLite for database will be used.

2. **Workloads and Organization**

   Server side: İlhan Güler

   Mobile: İlhan Güler

Workload	State	Date	Queue
Android Demo	Completed	Week 1	1
Server Core Components	In Progress	Week 2	2
Server Database Integration	Idle	-	3
Android Complete GUI	Idle	-	4
Custom Push Notification Service Integration	Idle	-	5
Android Network Implementation	Idle	-	6
Android and Server Integration	Idle	-	7
Test Phase and Fixes	Idle	-	8