**Goals: main project objective**

* Develop MP4 creator in Golang
* Develop a basic live video streaming web service over HTTP using the Golang programming language

**Scope: what is and is not to be done?**

There is MP4 parser (also creator) in Java but there is no similar open source in Golang.

Basic live video streaming web service over HTTP

**Methodology: how is it to be done?**

We will start with building the main building blocks: MP4 creator and video receiving module.

And then we will build solution on top of it

**Milestones: when is it to be done? A timeline of what expected to be done for each week of the semester. Especially what we can expect to see already at the midway meeting?**

First milestone:

* Study Golang and implement video receiving module which receives video stream in MPEG2-TS, de-packetize the video compressed frames (H.264 format) and store the complete GOP (Group of pictures, I frame and then series of P frames) as local file
* Stretch goal – MP4 creator in Golang

Second milestone:

* MP4 creator in Golang
* Basic live video streaming web service over HTTP using the Golang

**Development environment: languages, tools, IDE, special h/w and s/w**

Golang, Gogland, JavaScript and Java

**Significant risks: can the project get stuck on anything?**

IBM has a similar web streamer in Java so it is doable.

Possible small risk is that the development of the MP4 creator can be found too complicated but there is a reference code in Java (MP4Parser open source)

**Deliverables: what will we get at the end?**

* MP4 creator in Golang
* Basic live video streaming web service over HTTP using the Golang programming language

Video streamer

Transmitter.zip run launch.bat (you may need JRE 7 to run it)

MP4 parser open source

<https://github.com/sannies/mp4parser>

TestMP4.java is a sample code for how to use MP4 parser to create a **fragmented MP4 (we need this type of mp4 for streaming)**

Some Golang MP4 related projects – not sure if they support fragmented MP4 that we need

<https://github.com/ThankYouMotion/mp4>

<https://github.com/oikomi/gomp4>

Mp4 explorer

<https://mp4explorer.codeplex.com/>

Java script sample code to get the video segments

* We will soon provide it

VLC player download:

<https://www.videolan.org/vlc/download-windows.html>

How to play the video from the streamer

