1. Automation Framework

FPS data need to be collected for different encoder and decoder configurations. For each of the configuration a separate XML file will be created. This XML configuration file will contain details about all the parameters of the test. These XML files will be passed to a CPP script which configures the encoders and decoders. Passing of these XML files will be controlled by a batch file / Make file / shell script. The executable will parse the XML file and setup encoders and decoders as per the settings defined in the configuration file. The user will be given full flexibility to run all the tests or only some of the tests as per the need. This flexibility will be in batch file / Make file / shell script.

A MDN decoder card (VDC) will be used to provide video inputs to the encoder cards. FPS is calculated using following formula.

$FPS_{ENC} = (END_{TS} - START_{TS}) / 90000 * 29.97$

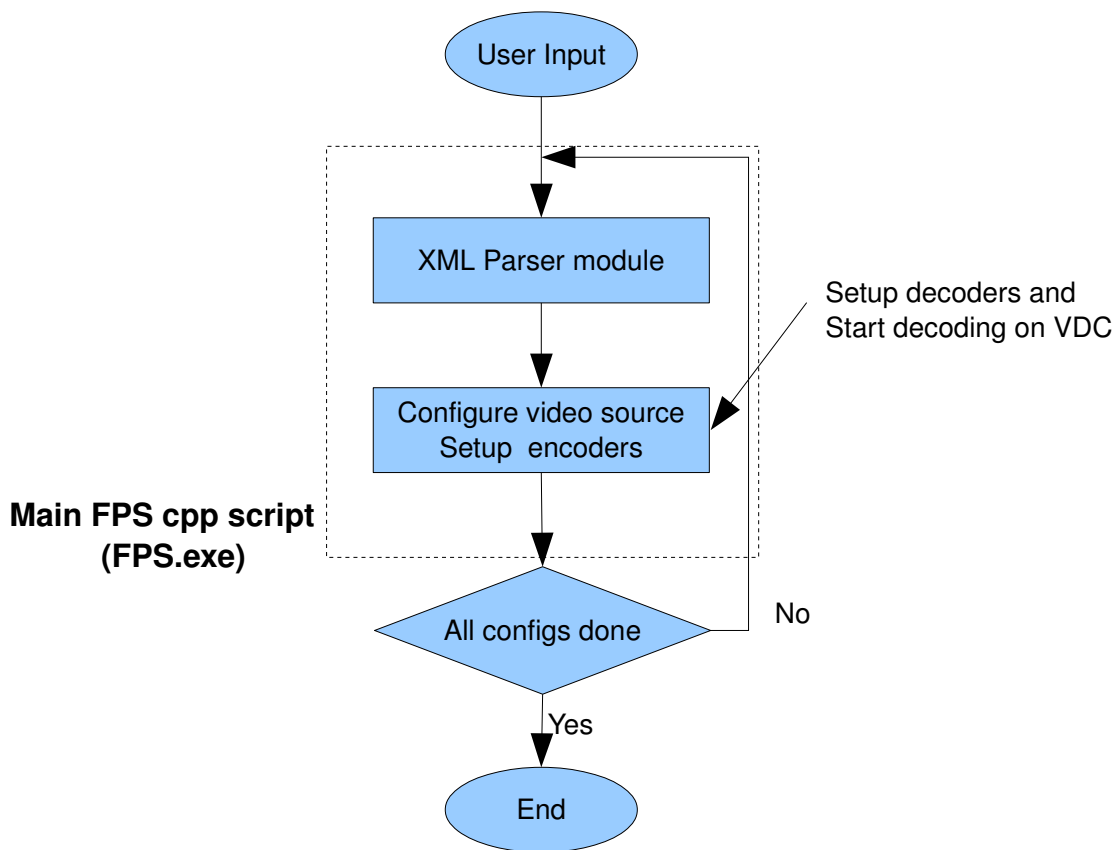The following flowchart explains steps involved in encoder FPS tests.

Fig 1. Scheme for Encoder FPS testing

Table 1. Time taken (minutes) for one round of testing (H.264 only)

Machine 1	Time	Machine 2	Time
Board 1 encoder FPS tests	240	Board 2 encoder FPS tests	300
Board 1 decoder FPS tests	40	Board 2 decoder FPS tests	60
Total duration	280		360