Analysing UCBT's implementation of Inquiry Protocol

1- Every train always have 16 unique frequencies.
2- (!) It is not compulsory that frequencies in train A can not appear in train B, in same traversal ABAB.
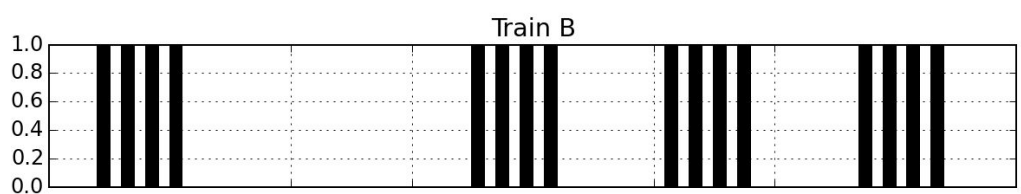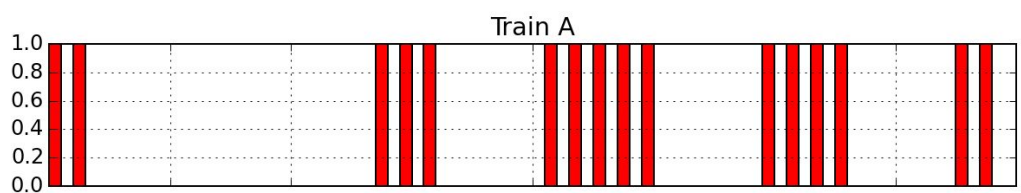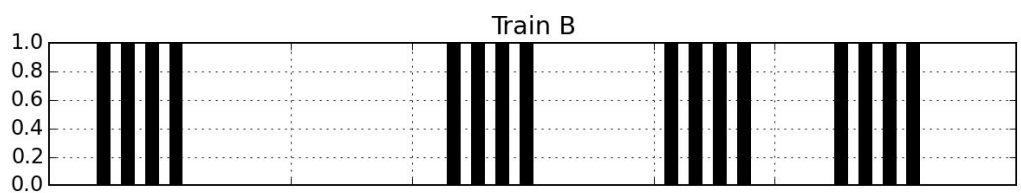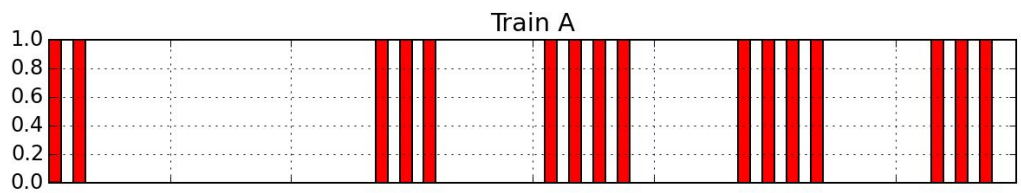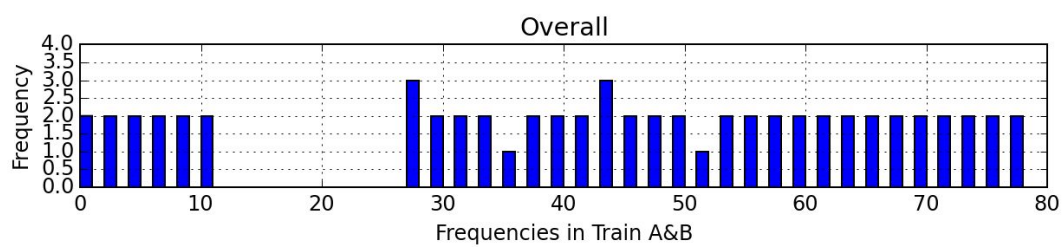
Find attached a few plots for random traversal i.e. 1 x ABAB:

Train A

Train B

Train A

Train B

Overall

Frequency

Frequencies in Train A&B

Train A

Train B

Train A

Train B

Overall

Frequency

Frequencies in Train A&B

Train A

Train B

Train A

Train B

Overall
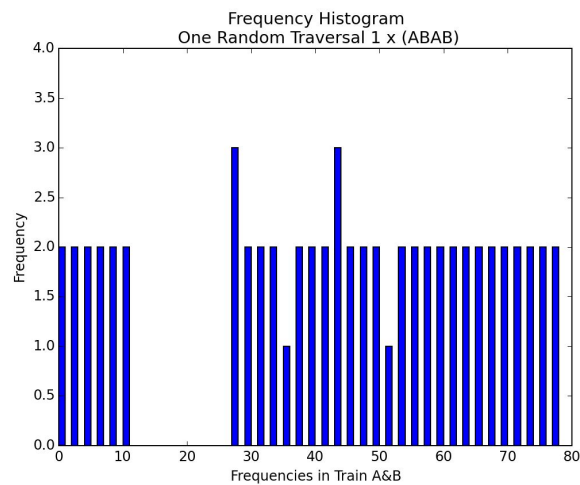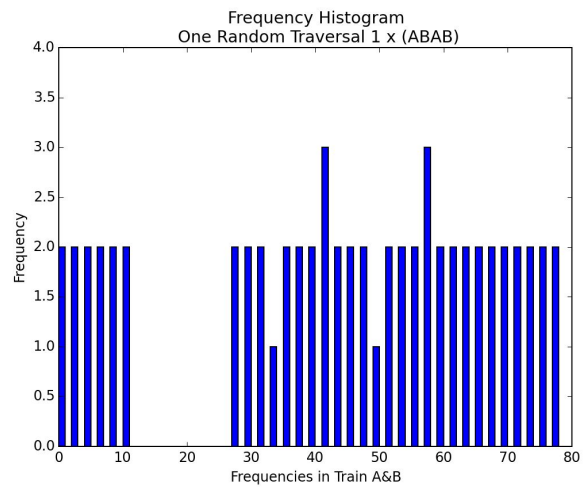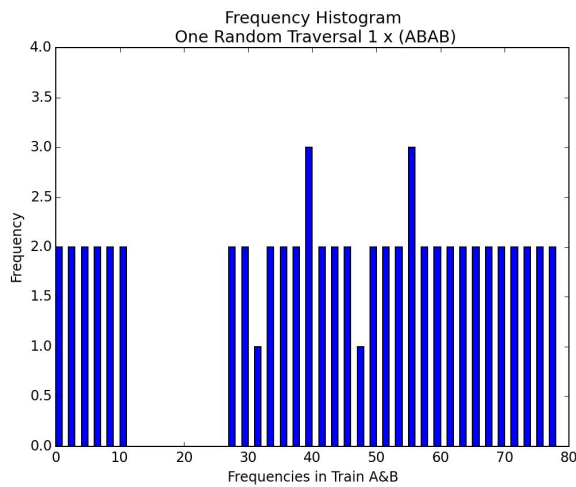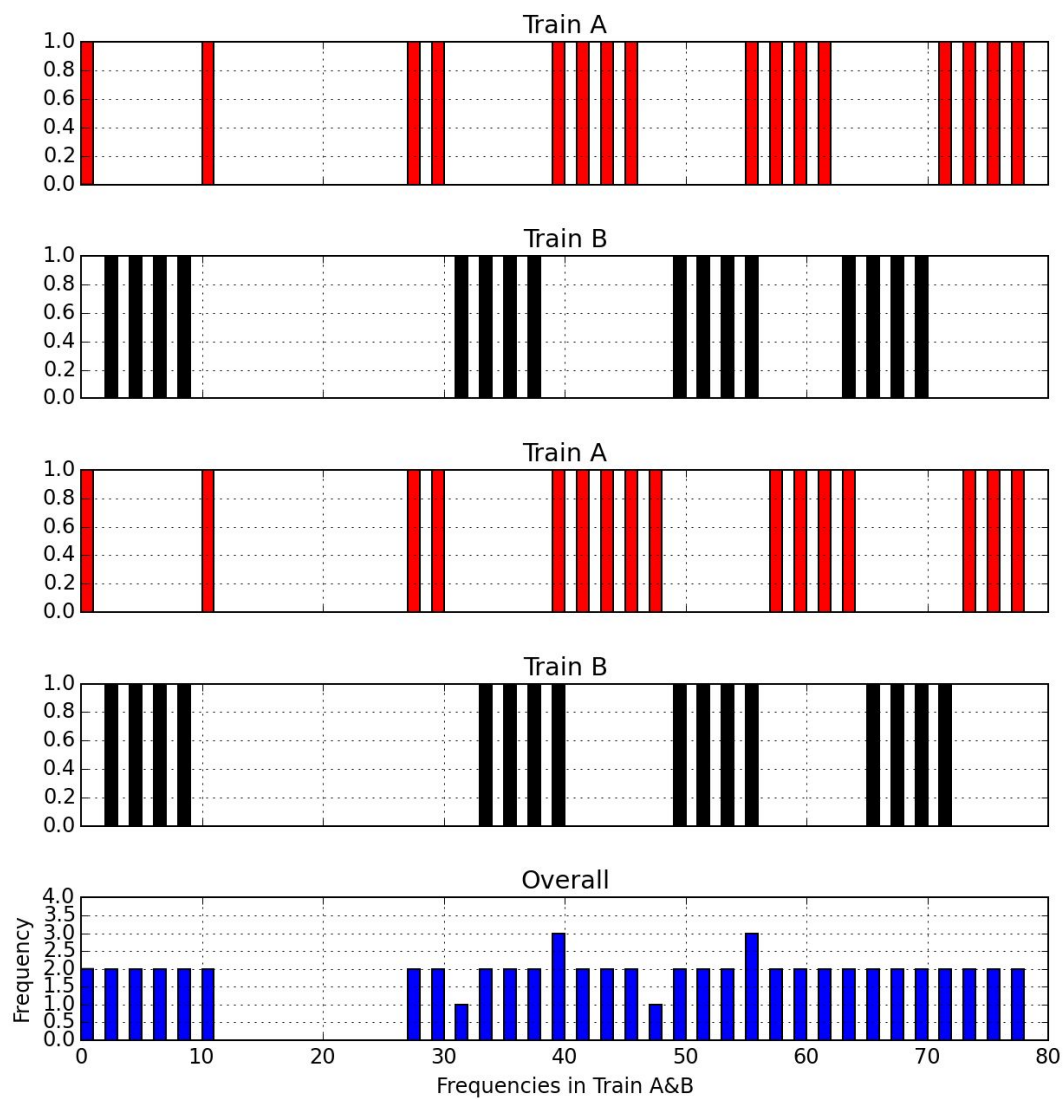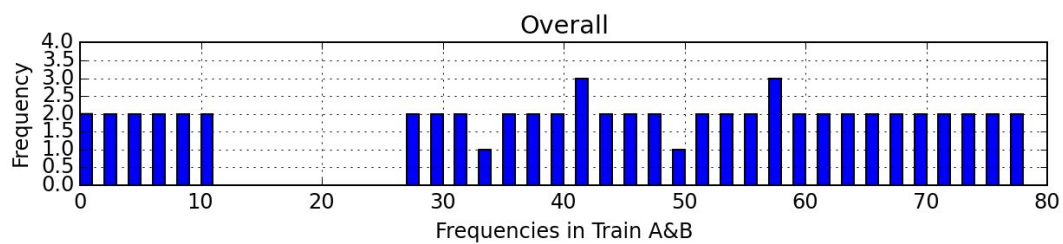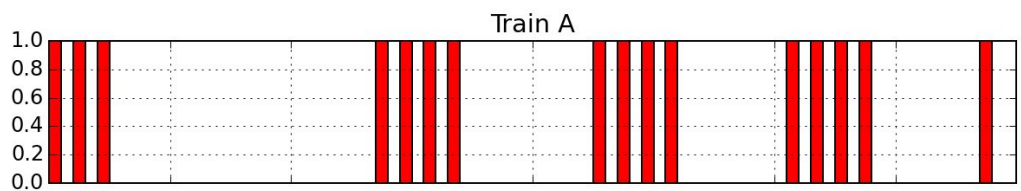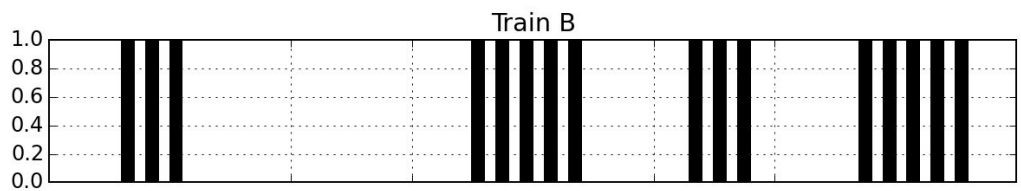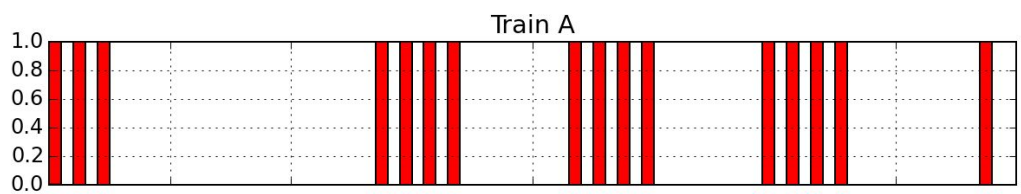
3- But once this is repeated 32 times (since there are 32 frequencies in total), we get a uniform distribution. Hence every frequency occurs 64 times, find attached the histogram below:

Frequency Histogram
Master traversed trains 32 times 32x(ABAB)
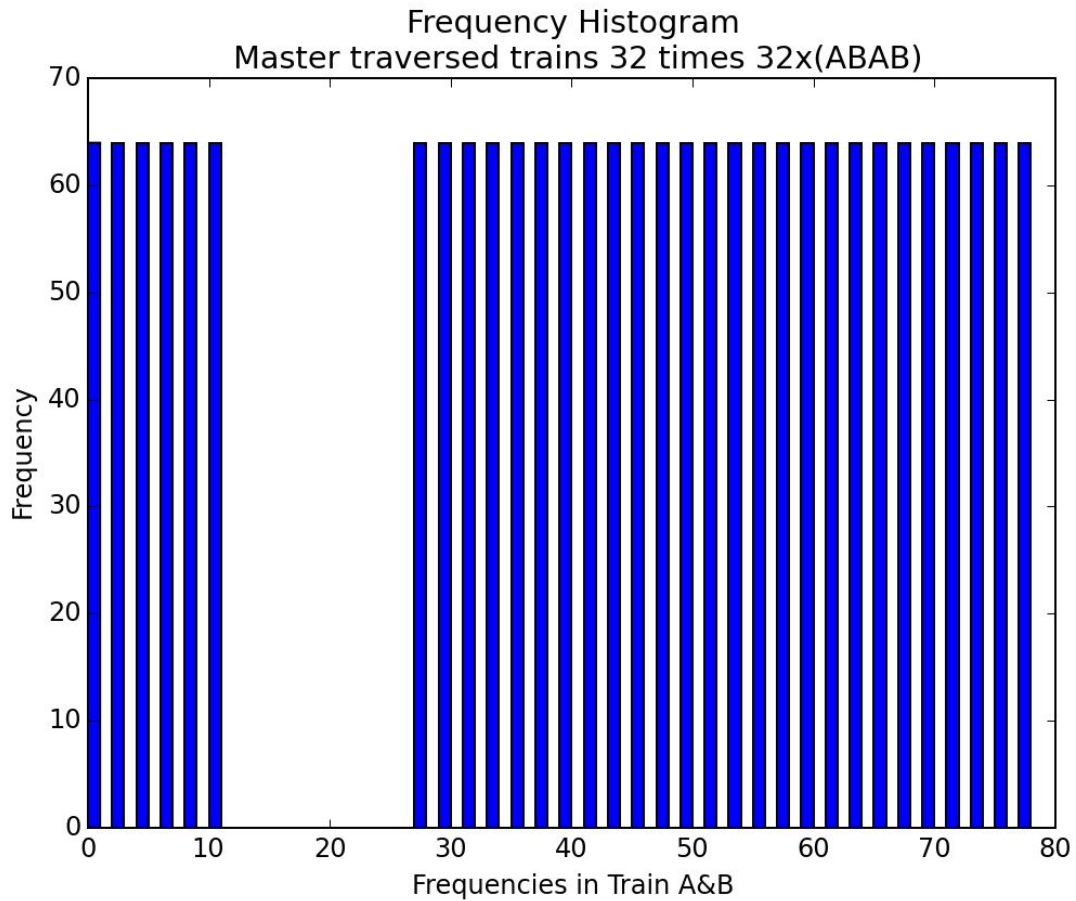
4- It all makes sense now. The code is available in C++ and I believe there should not be any issue to port this over to SUMO.