```
predict Bandwidth = predict bandwidth(Bw history, Error)
for j in range(GoP):
    Esm history.append(predict Bandwidth[0])
if index >= tau:
    Bw history = Bandwidth[(index+1-tau)*GoP:(index+1)*GoP]
    for i in range(GoP):
        Esm_history. remove(Esm_history[0])
else:
    Bw history = Bandwidth[0:(index+1)*GoP]
Error = 0.0
for j in range(len(Esm history)):
    if j%GoP==0:
        Error = max(Error, abs(Esm history[j]-Bw history[j])/Bw history[j])
```