ChronoTimer Use Case Model

I. USE CASE: Timing the Race

A. Actor: Sports Official

B. Preconditions:

1. Unit is turned ON
2. Two channels are enabled for competition type of individual event
3. Competitors are queued up for runs
4. Sensors are enabled

C. Normal course:

1. Official pushes START when competitor begins race
2. Console will display start time with competitor's id
3. Official pushes FINISH when competitor reaches finish line
4. Console will display finish time with competitor's id
5. Console will display total elapsed time with competitor's id
6. Console will log the events in the event log

D. Alternate courses:

1. Competitor did not finish and console doesn't print FINISH and TOTAL time
2. Competitor had an invalid start and console will not print out

E. Exception courses:

1. QUEUE is empty so console doesn't print out anything
2. Official presses OFF (timer stops) or EXIT (simulator ends) so console doesn't print out anything

F. Post-conditions:

1. Official will repeat normal course until queue is empty

G. Frequency of use:

1. Used for length of queue

H. Assumptions:

1. Unit timer will continue to run from START to FINISH
2. Competitor will finish the race and have a valid start
3. Official will not press OFF or EXIT during the run
4. Defaults for unit are correct

II. USE CASE: Printing out results

A. Actor: Printer

B. Preconditions:

1. Printer is ON
2. Printer cannot print any previous events

C. Normal course:

1. Printer will print out events starting from current event
2. Console will simultaneously record events in event log

D. Alternate courses:

1. Queue is empty (cannot print anything)

E. Exception courses:

1. Printer is turned OFF (cannot print anything)
2. Simulator is exited by other user

F. Post-conditions:

1. Printer will continue printing until turned OFF
2. Printer will continue printing until queue is empty

G. Frequency of use:

1. Can be used from 0-unlimited uses

H. Assumptions:

1. Printer has paper and ink
2. The console event log will have the same or more data as the printouts
3. Runs will start and end correctly