2D.9 Timing, Photo Finish and False Start Monitoring

1. A Fully Automatic Timing and Photo Finish System must be used for the track races at Unicon and is strongly recommended for track races at all other competitions. The system must have been tested, and have a certificate of accuracy issued within 4 years of the competition, including the following:

   1.1 The System must record the finish through a camera positioned in the extension of the finish line, producing a composite photo finish image of at least 100 images per second, ideally 1000 images per second. The image must be synchronized with a uniformly marked time-scale graduated in 0.01 seconds.

   1.2 The System shall be started automatically by the Starters signal, so that the overall delay between the start signal and the start of the timing system is constant and equal to or less than 0.001 second.

   Note: *A system that works not automatically at start and finish will not produce fully automatically measured times and therefore does not comply with this requirements.*

2. *The placing and times of the riders shall be read from the Photo Finish image by means of a cursor with its reading line guaranteed to be perpendicular to the time scale.*

   Note: *In order to confirm that the camera is correctly aligned and to facilitate the reading of the Photo Finish image, the intersection of the lane lines and the finish line shall be coloured black in a suitable design. Any such design must be solely confined to the intersection, for no more than 20mm beyond, and not extended before, the leading edge of the finish line. Similar black marks may be placed on each side of the intersection of an appropriate lane line and the finish line to further facilitate reading.*

3. *The system must automatically determine and record the riders finish times and must be able to produce a printed image (in physical form or into a file) showing the time of each rider. Additionally, the system shall provide a tabular overview showing the time or other result for each rider. Subsequent changes of automatically determined values and manual input of values (like start time, finish time), shall be indicated by the system automatically in the time scale of the printed image and the tabular overview.*

4. For the track races at Unicon a false start monitoring system, which is able to reliably detect a crossing of the start line before the start signal, must be used and is strongly recommended for track races at all other competitions.