

Athletics Canada
Road Race Measurement Seminar
May 8 and 9, 2004
University of Victoria
British Columbia



From left to right: Paul Adams, Evan Fagan, Laurie Upton, Sylvan Smyth, Fergus Mooney, Michael Stoehr, Mark Allison, Jim Allman, Brian Laslo, John Campbell, Gary Duncan, Rob Harmsworth, Phil McOrmond

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By Paul Adams

The seminar was organized by Evan Fagan, a member of the Team West Coast Running and Triathlon Club of Victoria and a Grade “C” measurer. Evan organized everything, including the advertisement, the registration, the venue, the food, the calibration course and a practice 5 km route. In addition, Laurie Upton, a Grade “A” measurer, assisted with the seminar by adding his experience and by videotaping the proceedings.

Students and staff met at the McKinnon Building, Room 150 on the University campus at 10:00 AM on Saturday morning. The lecture room in the McKinnon building had seating for 100 and made a very comfortable base for the 10 students and 3 staff who were present for the weekend. The room was well equipped with projector to assist with the use of the lap top computer and video camera. Also included were chalkboards and a flip chart.

After introductions all around the instructor, Paul Adams, discussed the importance of safe riding and the hazards that measurers were exposed to, in addition to the usual bike riding hazards. **Think safety, stay alert and always wear protective equipment (helmets and safety vests).** The seminar began with a discussion of the general principles of measurement followed by some practice calculation exercises. With

this basic understanding covered the group spent some time discussing the layout and requirements for a calibration course. Since it was now almost lunchtime the group decided to spend a few moments mounting their Jones Counters on their bikes. This provided a good opportunity to discuss the different types of bikes that are used for measurements and some of the difficulties that can be experienced with the different types.



After lunch the group assembled outside and ensured that all Jones counters were mounted and functioning correctly. A short ride took them to Cedar Hill X Road where Evan had set up cones to keep traffic away from the area to be used for the 300 metre calibration course. Everyone wore safety vests while on the road and while riding their bikes. The students, working in pairs, each made two measurements of one of the two calibration courses (one near the curb and one 2.4 m from the curb).



A practice bike calibration (4 rides) was made by each student before returning to the classroom to review the data and adjust the

calibration course length for the ambient temperature (27C).

Two of the pairs had measurements with differences of more than 2 cm between their two measurements while the other three pairs had good agreement between their first and second measurements. The following table lists the average length of each pair, corrected for the ambient temperature.

| | |
|-----------------|---------|
| Mike and Fergus | 300.074 |
| Rob and Sylvan | 300.004 |
| Jim and Phil | 299.974 |
| Brian and Gary | 300.114 |
| Mark and John | 300.019 |

We decided not to use the pairs of measurements where the difference exceeded 2 cm, and averaged the remaining pairs of numbers to conclude that the curb course was 300.074 m and the road course was 300.067 m. After the seminar the pins were moved so that both calibrations lengths were 300.000 m.

Two of the students had used a 100 m tape and even though they only had to do 3 lengths they found it more difficult than going 6 lengths with a 50 m tape. The long tape was difficult to get straight and it was very hard to communicate with the person at the other end of the tape (0.1 km away).

The rest of the day was spent discussing course set up and measurement techniques that will help get the shortest possible route. The session abruptly ended when the University staff arrived to lock up the room at 4:30 PM.

As arranged, the group met at 8:30 the following morning and proceeded to calibrate their bikes in preparation for measuring the course. After calibration, the instructor led the group around the 5 km

practice course, stopping periodically to discuss how they would measure the shortest possible route.



For measurement of the practice course the class was split into two groups of measurers. Each of the five measurers took turns leading their group and determining where to stop to mark a split. In this way everyone got a chance to practice setting splits and to choose the shortest possible route.

After the post calibration rides, the group reassembled back in the lecture hall to complete their calculations, compare results and discuss problems and observations. The following table summarizes the total distance attained by each measurer:

| | |
|--------------|-----------|
| Measurer #1 | 5.0096 km |
| Measurer #2 | 5.0043 km |
| Measurer #3 | |
| Measurer #4 | 4.9996 km |
| Measurer #5 | 5.0025 km |
| Measurer #6 | 5.0016 km |
| Measurer #7 | 5.0065 km |
| Measurer #8 | 5.0027 km |
| Measurer #9 | 5.0056 km |
| Measurer #10 | 5.0127 km |
| Measurer #11 | 4.9983 km |

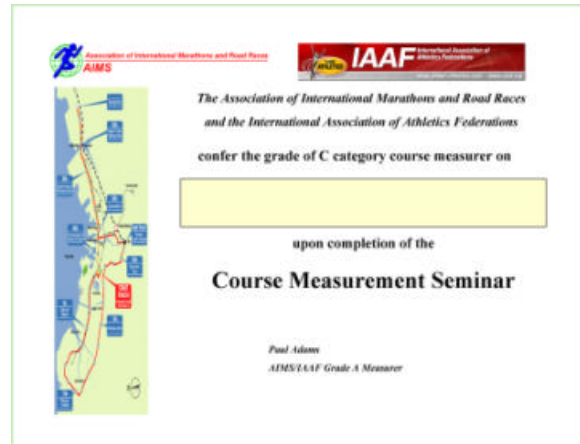
[note: the two groups measured to different end points, but the distances listed here are adjusted to the furthest point]

The course was quite complex and there were lots of opportunities to practice getting to the SPR. As a result, some of the measurements were well over the allowed 0.8% difference. This led to another discussion on the importance of riding a “tight” course. Laurie, who had been busy with his video camera for the past two days figured out how to feed his camera directly to the projector we had been using for the PowerPoint presentations. This allowed the class to observe the way we had all measured the course and easily determine how they could do it better next time.

After another fine lunch (this time pizza) a final hour was spent discussing maps, forms and documentation of splits. As the map is the most important part of the documentation several examples were examined in detail. In addition, examples of photographic split documentation were reviewed. Splits, although not usually part of the certification process is very important to the race director and it is critical that the splits can be accurately established.

As a final exam for the seminar each of the participants was asked to complete the certification forms for our practice route including a map. After the maps and application forms are submitted to the instructor he will critique them individually. As an added incentive to complete the assignment, a prize, consisting of a can of spray chalk, a can of spray paint and a surveyors notebook with waterproof pages. will be presented to the measurer who submits the best map.

Finally, AIMS/IAAF Measurer Grade “C” Certificates were presented to each of the participants for successfully completing the seminar.



Participants:

Brian Laslo, Parksville, BC
Mark Allison, Victoria, BC
Michael Stoehr, Saanichton, BC
Rob Harmsworth, Victoria, BC
Fergus Mooney, Sidney, BC
Jim Allman, Victoria, BC
Gary Duncan, Victoria, BC
Sylvan Smyth, Victoria, BC
Phil McOrmond, Victoria, BC
John Campbell, Duncan, BC

Instructor:

Paul Adams, Grade “A” Measurer

Assistant Instructors:

Laurie Upton, Grade “A” Measurer
Evan Fagan, Grade “C” Measurer

Venue Organization:

Winona Pugh