THE ATHLETICS CONGRESS TAC USA

Road Running Technical Committee

MEASUREMENT NEWS

September 1987 Issue #25

THE 1984 OLYMPIC MARATHON MEASURING TEAM

Los Angeles — April 24, 1983

L to R: Policeman, John Brennand, Allan Steinfeld, Tom Duranti, Paul Christensen, Bob Letson, Pete Riegel, Jim Delaney, Tom Knight, David Katz, Bob Baumel, Pete Shandera, Carl Wisser, Tom Benjamin, Will Rasmussen, Ron Scardera, 3 unknown, Policeman.

MEASUREMENT NEWS

#25 — September, 1987

SALLY NICOLL AILING

She writes:

As you may have heard I have a battle going here with the "big C". Unexpected surgery on the 24th of July revealed the presence of cancer in both ovaries and in the tissue surrounding them. I am recovering well from the initial surgery and begin a series of chemotheraphy treatments tomorrow that will take me into January to complete. I do not look forward to this or the side effects, but I am determined to lick the odds I was given. I will be staying here most of the time throughout as I have great faith in the doctors with whom I am dealing. Continue to use the NH address until I say otherwise. I still plan to attend TAC Convention (even if I have to wear wigs and hats) and the doctors have said they can schedule treatments around it if I mind. I intend to.

There's not a whole lot the rest of us can do except wait and hope for the best. I'm sure any extra cooperation we can give her at this time will be appreciated. Pray, hope or influence the Powers in the best way you know how. Every little bit helps. Hang in there, Sally.

NEW APPOINTMENTS

Dan Brannen has been appointed Final Signatory for New Jersey. Congratulations, Dan. In addition, Frederic Wilson is the Alaska certifier, Robert Edwards is now the Pennsylvania certifier, and Doug Loeffler has been appointed as a certifier in Florida. He'll be operating under the guidance of Basil Honikman.

SUM OF SHORTEST SPLITS

Sum of Shortest Splits - I shot down a recent course that was mailed the day before race day. SOSS added up to less than nominal distance. I couldn't give it a certification knowing that. But I just got Pan Am Games Marathon course #2, and SOSS is 20 meters less than shortest measured distance. I am going to certify it. We are treading close to a major change in our methods when we use SOSS. I believe we can do a better job of review using it, but I think we have to be careful or we will have to write it into our procedures, and that, I think, would be a big mistake. Our procedures are already about as complicated as a newcomer can handle. I'd hate to see what we do become an exercise for the elite.

Is there a way to write in SOSS as a standard procedure without making a lot of trouble for ourselves?

August 25, 1987

To all Measurers and Certifiers:

1988 will be an exciting year for Road Racing and Track and Field with the Olympic Trials and the Olympic Games in Korea.

The Men's Olympic Trials Marathon will be contested at the Jersey Waterfront Marathon at the end of April.

The course will be measured for certification by Dan Brannen of New Jersey and I will coordinate the Validation activities.

The race course is a typical urban route with a great deal of vehicle traffic, parked cars, and just to make life interesting over eight hundred yards of grass at the start and the finish.

In addition, due to construction, the course may not be finalized until just a few weeks prior to the race, resulting in a great deal of last minute measuring.

I would like to invite all measurers who wish to participate in this Validation to contact me by mail - David Katz, Box 822 Port Washington, New York 11050. Please include a short resume of your measuring experience including some of the courses measured.

Funds for the Validation will be limited, but we will try to accomodate as many measurers as possible. Because of the last minute nature of this measurement, a large pool of measurers will be needed.

Sincerely yours,

David Katz

David Katz
P.O. Box 822
Port Washington, New York 11050
(516) 883-5599

FINISH LINES

TIME	PLACE
0:44:13	1213

Finish Line Sub-Committee
3717 Wildwood Drive
Endwell, NY 13870
(607) 754-2339

Well, Pete set the trap and I sure jumped right in. In the July issue of MN, Kevin Lucas suggested a section of each issue of MN for each member of the RRTC. Pete rendered an opinion that this would force people to say something each month just to say something. I wrote back to Pete saying I like the idea of the Finish Line Sub-Committee having a page since this should motivate me to get something to him every other month. There is so much that can and should be done to improve finish lines that I don't think Pete's concern applies to the topic of finish lines.

So, of course Pete wrote right back and granted me the Finish Line Corner and suggested I create my own header. My first inclination was to draw a picture of a Roman soldier keeping runners in a chute with a bull whip. However, I got lazy and created the above header. At first I considered a clock showing the current world best for the marathon and the first place. However, I decided instead to put a more "normal" time for a middle of the pack runner in a 10K to emphasize that we care about the average runner as well as the elite. Now I need material. Please send to above address. In addition, I have a huge file on finish lines sent to me by Ken and Jennifer Young.

As I've said before, the course measurement and certification are in fairly good shape. Also, the finish line for the first few runners is okay. We have procedures in place with back-up watches so that we are quite confident of the times. However, when we get back into the pack, I'm afraid we have a real mess. Anyone who has timed a sizeable event knows the difficulty of getting good times for everyone. A race can only be run once. If there is a mess up in the middle of the pack and there are not enough backups, all is lost.

As an example of backups, consider the RRCA 10K championship put on by the Montgomery County Road Runners as part of the national RRCA convention this past May. They were using my program and had an IBM portable computer right at the finish line with push buttons feeding times from the Men's A, Men's B, and Women's finish lines. Neil MacDonald was backing this up with a TimeTech timer on the Men's A chute and another TimeTech was going on the women's finish line. Backing this up were Chronomix timers for all three finish lines. Half way through the race I was told no times were going into the IBM computer. (We found out later there was a short circuit in one push button extension cord.) I rushed over to Neil MacDonald to tell him he was no longer the backup but was the primary. (I thought he was covering finish lines A and B.) Neil informed me that he was only getting the A chute. No one had been put on the B chute. I looked behind me and there were several intense people clicking away at their Chronomix timers. They got the times. Three levels of timing and we needed that third level.

What can be done to improve finish lines? We have ruled out the rating of finish line companies. Another suggestion that keeps popping up is the certification of finish line officials. Wayne Nicoll has suggested this as well as others. Track and Field has them. Cycling has them. Why not road racing? Because no one has stepped forward and done it. Is there a need? I'm not sure. I know that in a well run race, the director has people in place that know what they are doing.

However, we have all seen officials who have no idea what they are doing. On the other hand, certified officials aren't always that great. I timed and scored a cycling time trial two years ago and the cycling federation sent an official from the state federation. The guy couldn't

read a digital stop watch! You're not going to believe this but the first competitor across had a time something like 1:03:21.2. (His watch had no colons between the fields.) He read out "ten, thirty-two, twelve". I wrote down one hour (assuming an implied hour on the front) 10 minutes, thirty-two seconds and twelve hundredths and went to put it in the computer. When I realized that the time didn't make any sense, I went back to him and watched him read the next time. When I tried to tell him how to read the times, he replied, "That's the way I read a stopwatch!"

Well, I digress! I'm not sure we need or want official officials and I'm certainly not willing to start organizing what would be required. However, this is what I see the task of the certified official to be:

1. Before the race obtain a copy of the map of the course and talk to the director to see how the timing is to be done. In particular, go over back up procedures.

2. Before the start, meet with all timers and course marshals. Make sure that the marshals know their jobs.

3. Ensure that all watches are started at the start -- not from a running watch.

4. Make sure that people are assigned to stop a watch on the first male and female finishers and, when possible, on potential age-group record setters.

5. Have someone assigned to spot check some finishers at random and check these against the posted results later on.

Is there a reader of MN who knows about TAC's program for officials for track and field? Maybe we can learn something from it.

Like I say, I'm not sure we really want or need certified officials. However, I think something has to be done to ensure good results for all runners -- not just the elite.

Bar Codes (continued)

I have had more contact with Jack Moran on bar codes and bar code readers. He felt the price I quoted of $500 to $1000 is too high since he uses a much less expensive one. Based on a letter of his, I implied that his is not reliable. However, he was talking about bad reads due to messed up bar codes -- not the wand breaking down. As if to collaborate what he said, I should point out that the bar code wand I am using now costs $295 as opposed to an earlier one which is $550. The bar code wand that Jack uses costs $170 but requires software.

Also Jack and I have been exchanging information on what material to use for the bar codes. Both he and I have had the problem of bar code labels getting quite messed up due to liquids. Jack has found a label made of Tyvek(tm)* which is the same material used for most competition numbers. He is testing these and I hope to soon.

Finish Line Sub-Committee Members:

Alan Jones
Christopher English
Philip Lockwood
Rick Staback
John Boyle
Walt Jorgensen
Jack Dowling
Jack Moran
Sally & Wayne Nicoll
Allan Steinfeld
A.C. Linnerud
Bill Grass
Fred McCormick
Fred Torres
Ken & Jen Young
Neil MacDonald
Mark Crook

Alan Jones, Chairman

* Trademark of duPont

MYSTERY PUZZLE SOLVED!

Last month readers were asked to guess the location of a 5.7 km race course that started 100 ft above sea level and dipped twice to 120 feet below sea level before finishing at minus 20 feet.

Last time I saw Dan Brannen, who measured the thing, he showed me the profile and asked me to guess. My first thought was Death Valley, but the distances didn't seem great enough. Then Dan said it wasn't too far from where he lives in New Jersey, and then (having grown up in northern NJ) I got it. But knowing that Dan was the measurer made the solution too easy, so I threw it (without the hint) at the readers of Ultrarunning and MN as a challenge, with the inducement of a used t-shirt to spur creative thinking.

Four responses were received:

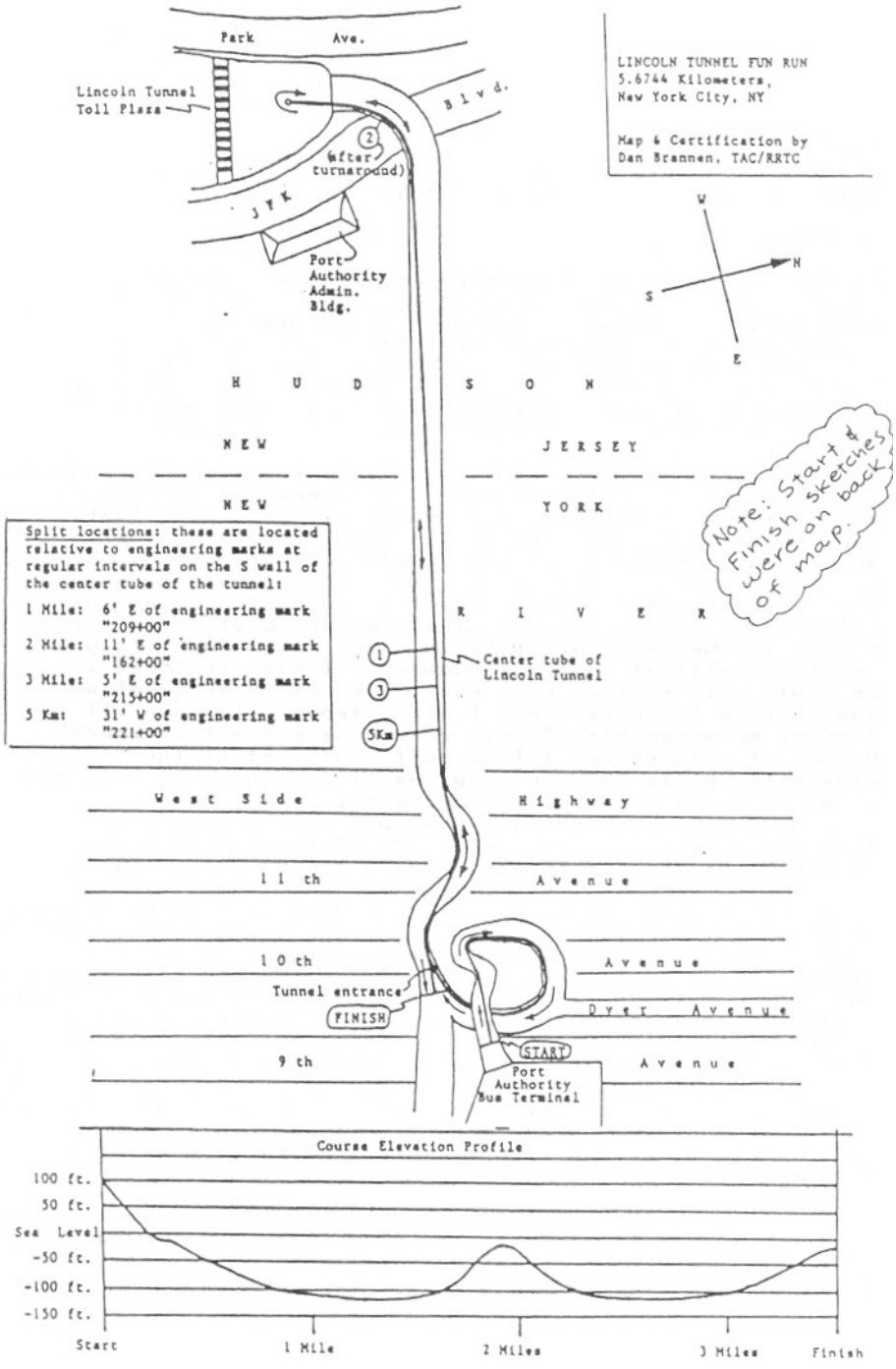
Stan Wagon (Editor, UR) wrote: "It took me a while, but Death Valley just didn't seem right. Then it hit me. Must be an urban sub-river tunnel. Probably out-and back by the symmetry. I know 3 such: Callahan Tunnel in Boston, the Lincoln Tunnel in NYC (or is there also a Holland Tunnel in Manhattan?), and I think there is another one on the north side of Baltimore. Such a race has to be in NY, so my official answer is "Under the Hudson River on the west side of Manhattan."

Steve Barr (Victoria, BC) guessed Death Valley. He added that such puzzle-solving "might keep me busy while I mend from Western States. I ran it with an injured foot, and it didn't do it any good. My physio just shakes his head. Awaiting my T-shirt." Sorry, Steve, you weren't even close.

Dan O'Flaherty (Newark, NJ) correctly identified the course as the Lincoln Tunnel "Double Crossing" 5k, 5/31/87, starting at the Port Authority Bus Terminal. While it's not truly 5k, Dan's answer is the closest one to the truth. He gets the valuable t-shirt.

Amy Morss (Storrs, Ct) got the general idea. See letter this issue.

Historical note: I wore the shirt on the occasion of the measurement of the 1984 Los Angeles Olympic Marathon course measurement, and it survived the entire 42195 meters of biking. I expect it to be properly enshrined, Dan. Please do not perspire in it or otherwise abuse it. Some day it will be a collector's item.


LINCOLN TUNNEL FUN RUN
5.6744 Kilometers,
New York City, NY
Map & Certification by
Dan Brannen, TAC/RRTC
Park Ave.
Lincoln Tunnel Toll Plaza
Blvd.
(after turnaround)
JFK
Port Authority Admin. Bldg.
W
N
S
E
HUDSON
NEW JERSEY
NEW YORK
RIVER
Note: Start & Finish sketches were on back of map.
Split locations: these are located relative to engineering marks at regular intervals on the S wall of the center tube of the tunnel:
1 Mile: 6' E of engineering mark "209+00"
2 Mile: 11' E of engineering mark "162+00"
3 Mile: 5' E of engineering mark "215+00"
5 Km: 31' W of engineering mark "221+00"
Center tube of Lincoln Tunnel
5Km
West Side Highway
11th Avenue
10th Avenue
Tunnel entrance
FINISH
Dyer Avenue
9th Avenue
START
Port Authority Bus Terminal
Course Elevation Profile
100 ft.
50 ft.
Sea Level
-50 ft.
-100 ft.
-150 ft.
Start
1 Mile
2 Miles
3 Miles
Finish

307 Dartmouth Ave.
San Carlos, CA 94070
(415)594-9406 Home
(415)854-3300 Work
x2955

Sally Nicoll
c/o Ragged Mountain Club
Potter Place, New Hampshire 03265

Dear Sally:

Enclosed find my validation reports for the two race walks in Seattle, Washington. The one for the Grand Walk Course is straight forward with my making two measurements of the advertised 2500 Meter Loop which came out to 2,501.95 Meters & 2502.11 Meters . Therefore any multiple of the loop qualifies for records. That is for 8 Loops an advertised 20,000 Meters comes out to 20,015.60 Meters & 20,016.88 Meters for the 2 rides.

The PNAC December Race Walk Loop validation is unfortunately not so simple to state. I made 3 measurements on July 14 with eliminator tubes on both the front and rear. I also made a fourth measurement of the course on July 16 with an air tube on the front and eliminator tube on the rear. For the 3 measurements on July 14 I used the rough surfaced Genesee Park 804.672 Meter Baseline for both pre and post calibration rides. For the single measurement on July 16 I used the Genesee Park Baseline once again for both pre and post calibration rides; however, I also included two on route calibrations on a short 236.179 Meter Baseline that Carole Langenbach and I steel taped. Although all 4 of my measurements of this course agreed within roughly 0.053% of each other, I feel most confident of the fourth ride with an air tube up front as it was the only ride that I had on route calibration checks available. Therefore I have used only ride #4 in my two page validation report. That report gives results of 2,500.55 Meters for 1 Lap, 15,008.01 Meters for 6 Laps, and 20,010.99 Meters for 8 Laps.

A careful reading of my narrative report as well as looking at my Knight diagram and table of measurement results should explain some of my thoughts on the differences between the various measurements of this course. I should note that even had I used my Ride #1, all records for 15 Km and beyond should qualify as the rounded value for the 6 Laps comes out to 15,000.0 Meters . Unfortunately I was not able to answer fully the question of calibration differences due to surface variations and their dependences on the type of tube one is using. Bob Baumel believes that the differences are independent of the type of tube being used. I will try to do some experiments of my own with different tubes back here in the Bay area.

I am left with the problem of suggesting whether any additional distance should be added to the PNAC December Race Walk course, given the measurement results I obtained, especially in the first 3 rides even though I didn't use them in the two page

validation report. Well if I had been laying out the course for the first time on July 14 and used the higher constant method then I would have said add 3.33 Meters to the course by moving the start/finish 1.67 Meters North of its present position. On the other hand had I been laying out the course for the first time on July 16 and used the higher constant method, then I would have said add 2.38 Meters to the course by moving the start/finish 1.19 Meters North of its present position.

One could argue that since I used ride #4 in the two page validation report and that said that the course was all right then no additional distance has to be added, particularly since on all laps after the first one, one gets the additional 0.94 Meters due to the walkers having to go around the cone.

Also, given how experienced a measurer Tom Duranti is it's very hard to understand why his and my results didn't agree closer on this course. Be that as it may, I reluctantly recommend that the start/finish be moved North by 1.19 Meters in agreement with my being the layer out of the course on July 16, 1987 using an air tube on my front wheel.

I want to thank everyone I met in the Seattle area for being so great and cooperative in this endeavor. Particularly I wish to thank Carole Langenbach and her husband Bob for putting me up and putting up with me during my stay in Seattle. Carole spent virtually the entire 3 days with me and aided me greatly. It would have been impossible without her. It was great having her help with the steel tapings and reminding me to straighten the tape out during the measurements.

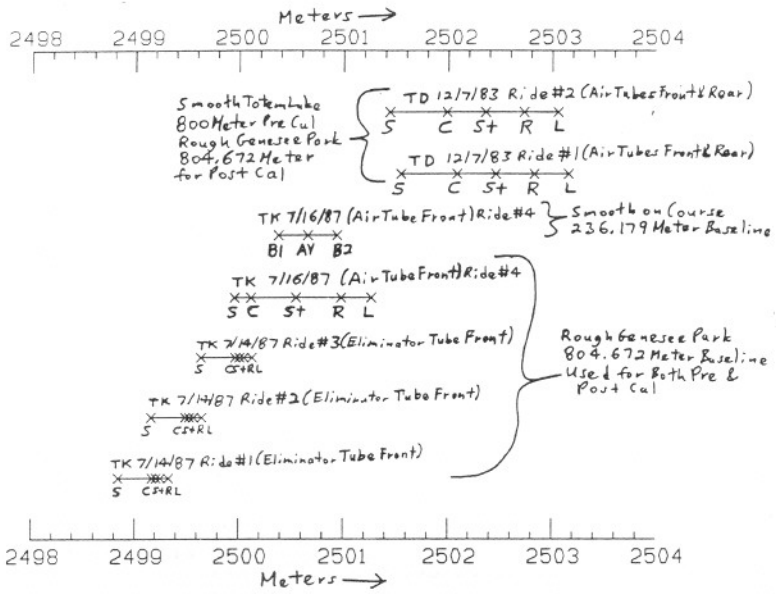
So off I go to find time to do some experiments on difference surfaces with different tubes as well as contemplating laying out short (near the course) calibration baselines for future validations.

Sincerely yours,

Tom Knight

Tom Knight

PNAC DECEMBER RACEWALK COURSE (Seattle, Washington)



TEMPERATURE CHANGES AND CALIBRATION

Here's something that's just for fun. I got interested last weekend when I was reviewing a submission by a guy who habitually uses a remote cal course. He usually has a quite large calibration change thus his courses are quite "safe". My wondering dawned into realization that I had a lot of temperature-calibration data on tap.

I gave the data-gathering about an hour and a half, then quit. I didn't throw out any points. I took them as they were submitted. I have a few hundred more courses I could do, but I don't have the ambition.

Any time you find yourself bored and at loose ends, why not take a shot at this? Of course, I suspect it will be quite like my own results, but who knows?

Some interesting conclusions, that are hardly news to us:

1) Temperature rises during measurement in most cases.

2) Calibration constant declines at the same time.

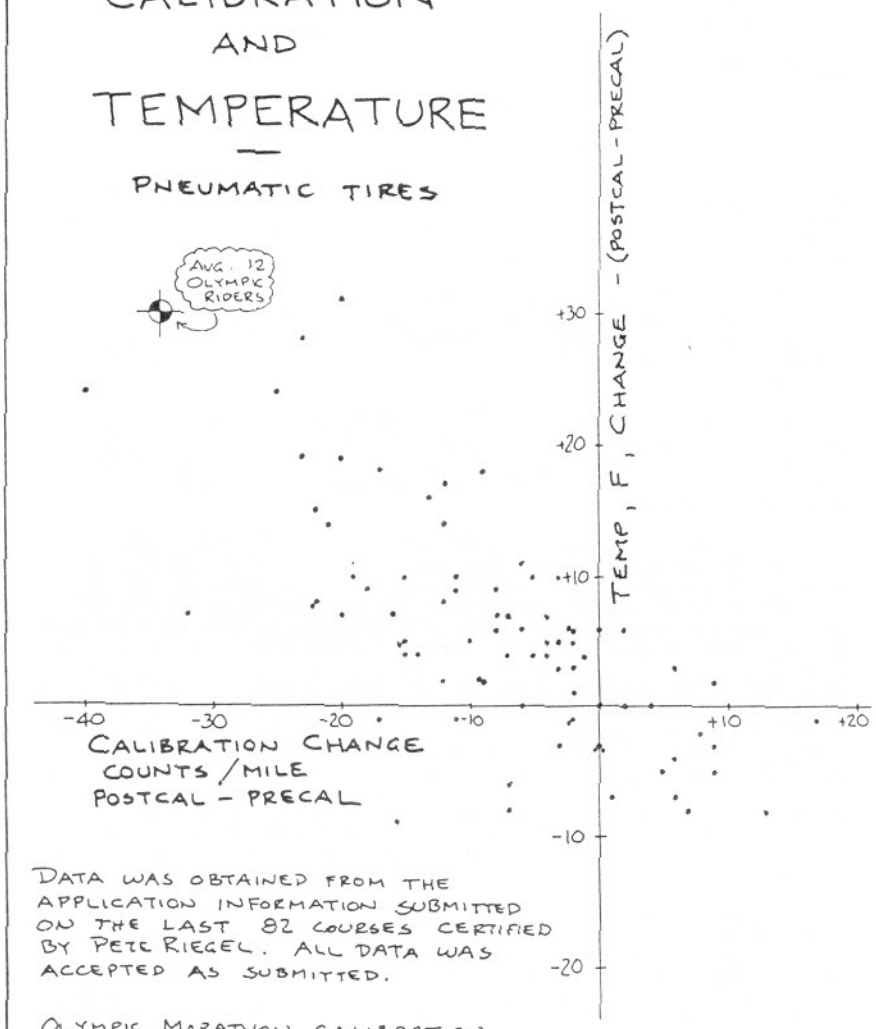
3) The precal constant is overwhelmingly the larger as BB has said.

This is not exactly heavyweight technical information, but it is fun to see the good agreement between the more-or-less random selections and the data gathered on the Olympic ride.

Your comments are welcome.

CALIBRATION AND TEMPERATURE

PNEUMATIC TIRES



DATA WAS OBTAINED FROM THE APPLICATION INFORMATION SUBMITTED ON THE LAST 82 COURSES CERTIFIED BY PETE RIEGEL. ALL DATA WAS ACCEPTED AS SUBMITTED.

OLYMPIC MARATHON CALIBRATION DATA IS INCLUDED FOR COMPARISON. DATA FROM 4-24-83

7-7-87 PSR

THE ATHLETICS CONGRESS
OF THE USA

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Peter S. Riegel, Chairman

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August 7, 1987

Tom Knight - 307 Dartmouth Ave - San Carlos, CA 94070

Dear Tom,

I wanted to say thanks for the copies of your validation reports on those two racewalk courses you did in Washington. I greatly enjoyed the read. The Grand Walk in particular had all sorts of good stuff to think about with all the various rides you did. I'm not done reading yet.

I'm becoming doubtful that we will ever be able to discriminate any difference in the behavior of Eliminators vs pneumatics on anything but a straight course. Riding variability seems to me to be big enough to mask any difference in a curving course. But each time we measure we learn a little bit more.

One recent thing we are doing is using a different cal course for the validation than was used for the layout. I don't think this is inappropriate. Our rules and procedures should certainly not require the use of exactly the same cal course. If our procedures are really correct we ought to be able to do it with any old cal course.

On your bent derailleur - you might try bring along an Eliminator wheel as baggage and leave the bike home. Then rent a bike at a local bike shop. They will almost certainly be able to fix you up with a good steed and you won't have the hassle of airporting your bike. I hate that process. And when you rent a bike you can pick and choose without offending somebody who might have brought a bike for you. John Disley travels this way too.

On a short validation, with an on-site cal course, a flat tire is of no consequence. But at Phoenix I would have been paranoid without my Eliminator. While I was there I had to lay out a new course for them. Was I glad Cichocki didn't go flat! If he had I'm not sure I would have been up to another 27 miles of riding.

We are seeing more spread between layouts and validations when different cal courses are used. In Phoenix we had a difference of 0.08 percent between your layout and my validation, and that course was hardly a test of riding skill - it's all straight lines.

I can see where these differences, which are sometimes larger than we might like, can lead us into shooting down some courses that shouldn't be. We will have to learn to deal with this. As I told Bob Baumel the other night, I'd not mind at all if our shootdown standard was set at minus 0.1 percent - the same as our SCPF. I don't think this would be unfair to either the current recordholder or the new one, just so long as we set the policy and adhere to it and not diddle around with it once we are set. There is still time to do

this - we have not shot down any really borderline courses yet, nor do I think we should. Any mistakes we make should err on the side of mercy.

I firmly believe that a TAC/RRTC certificate should have to be proven (or shown, if you prefer) to be wrong before we shoot down the course. If we put the cutoff at -0.1 percent no validator will feel bad if the course flunks, because he'll know in his mind that the real proof has been provided. Borderline measurements leave the validator feeling uneasy, and makes him look for things like adding 1.88 meters for the cone, as you did (appropriately).

By the way - in my opinion a course that passes validation should not have any distance added. It has passed the test and should be left alone. If a course flunks, then I'd add distance in accordance with our layout procedure. I detect that we have differing feelings on this. No big deal.

Marginally-oversize (because badly-measured) courses will still sometimes flunk. Us RRTC types using all our safeguards are safe, and I personally feel quite secure that my own courses are OK - because I believe they are really and truly quite a bit oversize. Those courses that are just a little bit oversize should not be flunked. Our purpose in validation should be to provide proof of shortness, or to accept the course as it is already certified. Validation should not be seen as an attempt to punish sloppy measurement, only to detect demonstrably short courses.

We have to tailor our coats to our cloth, and I think with bikes we may be expecting a bit too much sometimes. But that's just something we'll have to live with. We could be using EDM and steel tapes and we would still have the same problems. Only the numbers would be different.

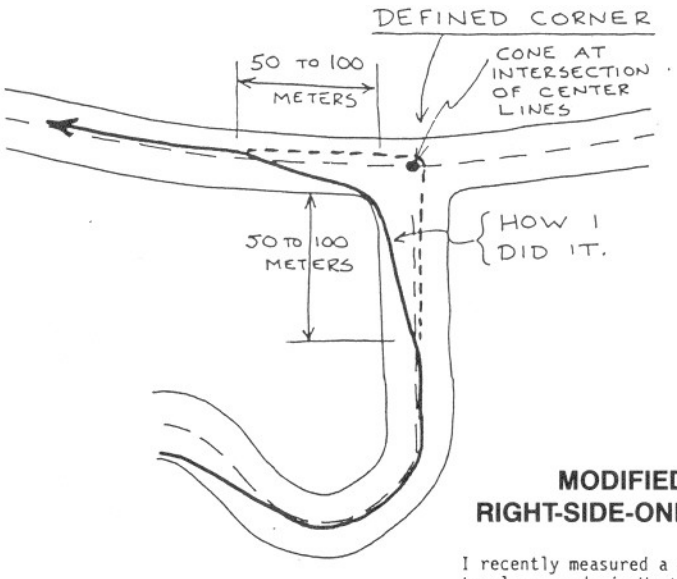
I think Letson was right in his proposal for both layout and validation. Use a SCPF that is big enough to include the measurement uncertainty. Then have a negative validation allowance equal to the same uncertainty.

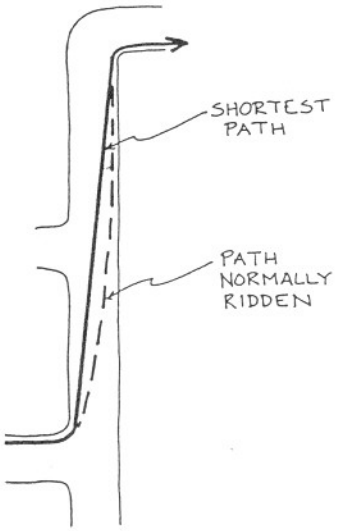
TAC rules now require the addition of an extra 0.1 percent to every road course regardless of the way it was laid out. I submit that this is a poor procedure. If the Fifth Avenue Mile was laid out with EDM, should 5.28 feet need to be added? No way, I say. Add a couple of centimeters and let it go. The biker who validates it would still have to come up with -0.1 percent to shoot it down. Of course, one might argue for a <u>minimum</u> addition of, say, 1 meter to all courses to allow for things like non-parallelism of start and finish which would come into play if we only added a couple of centimeters.

Our rules should be flexible enough so that any reasonable technique can be used to lay out a course, and any other reasonable technique used to check it.

Best regards,

Bob Baumel - 129 Warwick Road - Ponca City, OK 74601
Wayne/Sally Nicoll - c/o Ragged Mountain Club - Potter Place, NH 03265





MODIFIED SPR ON RIGHT-SIDE-ONLY LEFT TURNS

I recently measured a very winding course on two-lane roads in West Virginia. Because of heavy traffic, the course will be run in the right-hand lanes, and that's how it was measured. The course was a big counterclockwise loop and I did not want to attempt to saddle the director (or myself) with a cone requirement at each corner. How to do this?

Well before each corner I left the right-hand lane and rode the SPR to the inside of the corner. Coming out of the corner I gradually drifted to the right until I was once again on the right-hand side of the road. I marked on the map "Runners must stay to the right of center on all roads, but are free to run the shortest route within 100 yards of each corner".

What I did was analogous to what we all do when we have a left turn followed by a right turn, with a long stretch in between. Rather than ride a true SPR most of us will gradually drift over until we are on the right hand side. Even though we depart from the SPR, the deviation is not enough to make a significant difference. Is this an acceptable technique?

THE ATHLETICS CONGRESS
OF THE USA

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July 20, 1987

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TACSTATS - 7745 SW 138 Terrace - Miami, FL 33158
Rimini Bartolini - 810 University Ave #202 - Honolulu, HI 96826
Bob Baumel - 129 Warwick Road - Ponca City, OK 74601
Thomas J. Ferguson - 4191 Halupa St - Honolulu, HI 96818
Carl Ellsworth - 354 Uluniu Street - Kailua, HI 96734

Dear Above,

Sally Nicoll, after reading all the various things that were generated around the validation of the Windward Half-Marathon, decided I should prepare a "classic statement of measurement philosophy" that will cause lions to lie down with lambs and hawks with doves. Here goes:

My perception of the situation is this: The course was measured and certified. No good map exists in the RRTC files. At the time it was certified the requirement for a map was much looser than it is today. The course contained substantial areas in which runners were restricted to either a roadside bikepath or to one side of the road or another. Records were set. A validation ride was arranged. The original validation ride took the shortest route, using the whole road. A subsequent ride was taken along the more restricted route that was deemed to be the certified one, even though that route was evidently ignored by several runners seeking to shave distance.

Opinion seems divided on what was the proper route to validate. In theory, if a single competitor successfully shortcuts and is not disqualified for so doing, the route he takes is deemed to be "available to all" and the course should then be considered to follow that path. In practice, almost every large race has a lot of people hopping corners and nobody gets disqualified.

It is pretty rare for frontrunners to cut the course. Most of the shenanigans go on back in the pack. Should courses be measured along the route that a dedicated shortcutter would take? If they are, every corner would require the frontrunners to step up on it, run a couple of steps, and descend again - or stay out in the street and run a longer distance. That's lousy course design.

A course that is simply defined as staying within the boundaries of a set of streets is easy to follow and will be properly followed by most runners. Most runners are not inherent cheaters, and they know what's expected of them in most cases.

However, when unnatural restrictions are used, such as asking runners to stay on one side of an imaginary line, and which line may change from street to street, no assumption can be made as to where those runners will run, except to say that it will be unpredictable.

My own rule of thumb for dealing with the real world is to assume things when I don't have real information. I would treat validations like this, if someone should ask:

1) I would not measure anything at all unless I had obtained a copy of the original certification map and studied it. If nobody could come up with the original certificate and map I'd question the utility of even considering the course for records. A race director who doesn't have a map of his course lacks credibility concerning its accuracy.

2) If the course had a lot of cones, and the organizers could prove that the coned restrictions were actually followed on race day, I'd measure that way. If they could offer no such proof I would assume that the roads were available curb-to-curb.

3) I would cut a corner only if it was proven to me that a significant number of racers cut that particular corner.

In other words, I'd assume a curb-to-curb route unless evidence to the contrary was given. I don't think I'm alone here. Most of the experienced measurers are skeptical of the effectiveness of coned restrictions, and most will measure shortest possible route whenever possible, because it vastly simplifies both race-day setup and validation measurement if necessary.

I have to confess to a great puzzlement: In Tom Ferguson's letter of 17 June 1987 to Carl Ellsworth he says that the course as measured with coned restrictions was 81 feet short, and that the same course measured along the shortest possible route was about 1600 feet short. I haven't seen the figures, but that difference is incredible. I cannot imagine what kind of coning could result in a difference like that! I suspect either a mistake in measuring or measurements of two different routes. (ED. NOTE: TWO NUMBERS IN THE DATA WERE TRANSPOSED.)

In answer to Tom's "where do we go from here" I'll say that the coning or lack of same will have no effect on future certifications. Any race director is free to have measured and certified any route he wishes. We will certify any route that can be defined and measured. If a race director wishes to have a course with unenforceable restrictions, that's his prerogative. He should not complain later, though, when he is asked how he kept the runners on the legal course. If a record is set, that question will be asked.

I don't anticipate any future liberal interpretation of SPR. It means exactly what it says. The only place where I would tend to be liberal is in not insisting on the most cheater-prone route being everywhere followed. That, to me, is not consistent with our accuracy goals. To saddle the real competitors with added distance because a few turkeys choose to cut corners is, to me, poor policy and one which I will oppose if I have to. But, once the route is clearly defined, I don't see any liberalization coming along. A validation rider should ride the tightest legal course he can, trying at all times to follow the SPR to the letter.

Those who oppose a tight interpretation should seek a better way to write the definition of SPR. RRTC will listen! I think our rules should be followed to the letter where possible, and to the spirit where not possible to the letter. I oppose a hidden agenda of unwritten rules.

Sally's letter to me implied that some topics should be discussed. Here goes:

Remeasurement - We do this to assure the integrity of a record. It's only part of the process - the rest involves assuring that timing was properly done. A remeasurement is not intended to impugn anybody's honor - it's a process that is being done as much as possible to as many courses as we can reach. As a result we are coming to a fairly common consensus as to how to measure and how to describe what we've done. Remeasurements also serve as a good check of how good our measurement standards are - if people follow the directions and courses consistently remeasure short, then something is wrong and should be corrected. Fortunately most courses pass.

Importance of the Course Map - It's important because it says where the course is, and where it goes. It should be detailed enough (I tell my submittors) that I could come to the town and ride the exact course that was measured before. And I could do it with absolutely no help from any other person. The map must stand alone. The map is the final statement of what we certify. If it is not clear, the certification is vague. Vague courses lead to vague records. The map is used by the race director to set up the course, and if directors change, the map becomes vital to the new person. People's memories of where the course was last year are notoriously unreliable.

Documentation of Restrictions - Because of the above, anyone who measures a course should be thinking, as he rides, of the map he'll have to draw later. I myself use curbs, median dividers, bridge piers and road edges as my course definers. I shun the use of cones like the plague. Natural barriers stay put year after year, while cones must be put down each time, and in the right place. Once I have measured the shortest possible route, I tell the race director to cone as he wishes on race day, to suit the ever-changing safety desires of the authorities.

When creating restrictions it is important to think as a runner does. It's not smart to put in restrictions that are likely to be ignored by runners. The idea of "measure where the runners will run" has been replaced by "measure the shortest possible route". Except for a slight amount of extra tightness at the corners, the second measurement philosophy is identical to the first. Trying to restrict runners to a longer path is, in most cases, a lost cause and should not even be attempted.

The Need to Enforce Course Restrictions on Race Day - Here's where people start to object. After a great deal of time and effort has been made to get the course right, some object when records-keepers ask them to enforce the restrictions. When natural barriers are used the course is easy to monitor. Every cone requires someone to watch it and make sure the runners went right way 'round. If the course is not right records will not count and runners will get grumpy.

Enforcing restrictions is dead easy when there are none. If the course is measured on the unrestricted SPR, the race director can cone as he pleases on race day and he cannot make the course short so long as he follows the prescribed roads.

What Can Be Certified? If a measurer is willing to document a lot of cones, to try to get his measured course exactly like what will be run on race day, there is no reason why the course can't be certified. Almost anything can be certified - the sole requirement is that it be absolutely clear what it is. In my view getting the course right is the easy part. Credibility of results is harder to get. It's highly labor-intensive and can't be pondered over as can course measurement. Either the finish line goes right or it does not. No second chances. That's why all those backups - at which some directors bridle - are needed.

Personal Philosophy - (Not solicited by Sally) - I started running in 1973, and a certified course was pretty rare then. I grew to prize them for the opportunities they gave me to run against a standard I could trust. I still think that our certification work is of great value to the hordes of ordinary runners who will never set a record. Ordinary runners' PR's are the greatest beneficiary of our work. The noise we make about records, remeasurements, short courses etc is heard by the people out there, and I think it gives them confidence that the system is working for them.

In my personal experience in over 170 races my time was incorrectly recorded many times. I wear a watch, and I know. It no longer surprises me. If the course is certified I still know how I did. The lack of decent finish-line procedures does not bother me as a racer because I am mediocre and thus outside the records world. So are most runners. My own PR's and those of my friends are more important to me than those of the stars.

At the same time I like to read the records, because they are a yardstick of human potential. Although I myself may never actually contribute to that list, I'm convinced that those records have a lot of relevance to me as an aging racer. I have spent hundreds of hours writing and inventing things that were based on the list of age records. I want them to be respectable and not wishy-washy. I would love to see finish lines be better done than they are. I hope RRTC makes some headway here in the years to come.

These same race directors who have given me bogus times might bristle at the suggestion that their procedures were lacking. Many think that if you just put on a race, record acceptance automatically follows. Well, we know there's more to it. A record should be more credible than a fish story.

The changeover in records-keeping from NRDC to TACSTATS will not magically make all the problems go away. In the end it still comes down to the personal integrity of those who administer the system, and the honesty of those who send them race results and validation information.

I didn't intend for this to get so long. If you read the whole thing I thank you for your patience. As I read it over I am not sure whether I really told anybody anything they didn't know. But it felt good to unload, and I hope nobody is offended by anything I've written. Race directors are the good guys - the foundation of the sport - and it's important to remember this. We may get frustrated with them sometimes, but even a flawed race is (usually) better than no race at all. And as they keep directing they learn. We're all getting better at what we do.

Let's be patient with each other. We're all on the same side.

Amy Morss
P.O. Box 765
Storrs, CT 06268

July 27, 1987

Hi Pete,

Well, I figured it was time that I got involved in the Measurement News correspondence. Not enough female voices heard from it seems, so I thought your mystery course contest was a good way to say hello.

I asked one of my room-mates (who is quite a geography buff) where he thought the course might be. We both guess at Death Valley somewhere--(did you want specifics?). The map showed there are mountains around there to give the 100 foot elevation, and we figured it was definitely below sea level too. It seems too obvious though... Someone else suggested some sort of underground tunnel maybe...? Well, that's my guess.

So while I have you on the line, here's another bit of verbage. I was measuring a course this weekend rather far from home. I went up the night before to insure an early start. I spoke with Wayne N. about using the 1000' cal course method for this particular race. He gave me the details and I then planned to lay one on Saturday night. But, as I was explaining to my helper about how to do these sorts of things, I realized I didn't yet have a tension meter for my 100' tape. I had neglected to ask Wayne if you needed one--but I assumed I did, so my great plans were knocked dead in their tracks.

This brings me to the other thing I wanted to ramble about. Luckily I knew there was a cal course fairly local to the course I was measuring. I had the certificate for it, so I figured I'd use that. Everything eventually worked out o.k., but using someone else's cal course raised some questions.

How is one expected to find a course in a town if one doesn't know the town very well? The certificate tells where to locate the end points, but doesn't tell how to get TO the roads. Maybe this is something that should be included? This way a bleary eyed morning measurer doesn't have to depend on local gas stations (which may not be open at 5 a.m.) for directions to some obscure back road. A cal course I laid close to home is on a stretch of a main route and I realized it might take a fair amount of time to try and find it. The measurer's phone numbers are listed, but what if someone moves?

Also, maybe other details of the course should be listed. Is it a bumpy road? Are there likely to be parked cars on it later in the day? This was an old course I believe, so both of these conditions were factors. Anyway, I just thought the cal course certificate should be very explicit as to help a measurer as much as possible.

So tell me the details of the 1000' cal course. I think I have most of them, but I just want to make sure I'm not forgetting anything. I'm looking forward to becoming more involved in the world of measuring. I still feel rather green, so I'm poking my head out slowly. Maybe after the trials I'll have more confidence....

Cheers,

Amy

THE COURSE LIST

The course list is as dynamic as it was before. If you want a course off, all any regional certifier has to do is say so and it will be taken off the list and put into a file we call "discards". John White and I have done this with every course that anybody has asked us to do so far this year. Courses put into the "Discards" file won't appear on any more lists, but will remain available in case they're needed.

Renamings of courses are a pain. I personally would like to consider the course's number as its name and let it go at that. But I suppose there are valid reasons to go through the exercise of renaming a course. The issuance of a completely new certificate - with old map and new number - is one way, as you've seen. Or just a letter will do. We have not had too many of these so far, so we have not bothered with a policy to deal with it.

OK - here's a policy: For renames, do it like Kevin did - issue a new certificate. Use the old map. If this is a burden let me know. We should discourage frivolous changes, just as I'd like to discourage indiscriminate certification of splits. It adds too much junk to an already crowded list.

Replacements can be handled just as we are doing now - simple add "replaces XX8700X" under the ID number on the cert.

THE ATHLETICS CONGRESS
OF THE USA

Road Running Technical Committee
Peter S. Riegel, Chairman

3354 Kirkham Road
Columbus, OH 43221
614-451-5617 (home)
614-424-4009 (office)
telex 245454 Battelle

July 30, 1987

Amy Morss - PO Box 765 - Storrs, CT 06268

Dear Amy,

I'm sorry your search for a calibration course left you stymied. That's one reason why we are bringing in the allowance for a short, on-site cal course.

I've often contemplated using a cal course that somebody else laid down somewhere, and have had only marginal success. Once Wayne Nicoll and I were ready to measure in a large southern city with a beautiful cal course map, but the designated nail was nowhere to be found on the downtown course that somebody else had measured. I called the guy at 6 AM to ask him, and he couldn't help. Fortunately, a year before I had laid down a half-mile about 12 miles out of town, so we went there and used that, but much time was wasted.

The 1000 ft or 300 m on-site cal course eliminates all that nonsense.

As for a tension gage, use one if you have it, but don't let lack of one stop you. Just pull the tape with an estimated tension. Tension, unless you get ridiculous with it, has little effect on tape length. If it is a very cold day you should calculate the actual length (see Course Measurement Procedures - steel taping data sheet) of your 1000 feet - it may be an inch or two short. But you can save this calculation for later. Just do a good job of pulling and marking. You only have to do it once, but you must check somehow to be sure you counted to ten properly when you laid down the lengths. If your constant is quite close to its usual value that's a good check. Otherwise you can do a bike check, or you can pace over the course counting the intervals. If you write down several interval numbers on your roll of tape, and tear them off one at a time as you stick them down, you will not lose count. Before you tear off the last number, write down a couple more.

Be sure to mark your temporary cal course well enough so that it will still be there when you are done, or you'll have to lay down another one. For a point-to-point marathon I'd probably lay down a cal course at each end - it only takes 5 to 10 minutes!

Remember, no matter what you do, if you take good data you can lay down a pretty good course, and if you're still puzzled the data will allow somebody else to figure out what you are having trouble with. But don't let it buffalo you. Once you get to a certain degree of proficiency you're in there with everybody else. Some of us can figure better than others, but the real talent is in the bike-riding. So far we haven't established any documented Kings or Queens of the Road - just good figurers.

Best regards, Pete

xc: Nicoll, Baumel

THE ATHLETICS CONGRESS
OF THE USA

Road Running Technical Committee
Peter S. Riegel, Chairman

3354 Kirkham Road
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July 9, 1987

Gordon Dugan - 704 Ainapo St - Honolulu, HI 96825

Dear Gordon, (See July MN)

In your letter of May 8 to Wayne Nicoll you mentioned giving the AIMS Honolulu Marathon measurers a steel construction tape because you didn't have access to an engineering tape. You went on to say ".....a construction tape is not meant to measure within the range of precision expected of a steel engineer's tape used for surveying".

Several years ago I found myself wondering just how accurate ordinary hardware store tapes really were, so I called Lufkin. The guy there mentioned that their tapes were made to US government specs and that the tolerance was 0.1 inch/100 ft. He said their quality control readjusted things when the variation reached .7 or .8 of the limit.

Since the US Government is a big prospective customer the big tape manufacturers in the US undoubtedly meet the specs. The "accuracy" requirements for "tapes, measuring (steel, surveyor's)" and for "tapes, measuring (general use)" are identical.

The federal specs I have are GGG-T-106D (March 22, 1976) (general use) and GG-T-00116a(GSA-FSS) (surveyors') (January 31, 1968).

I enclose a copy of a letter I sent to Bob Baumel (3/18/83) when we were still babies at this measuring sport. I understand you are a Professor of Civil Engineering, so please overlook the naivete you'll undoubtedly find.

I think the difference between a surveyor's tape and a construction tape (besides ruggedness and robust construction) is likely to be the calibration of the surveyor's tape. My local surveyor friend says that he does indeed have a tape calibrated to USBS standards, but that it cost so much to get done that he uses it only as a standard against which to check his other tapes. I was pleased to see that my two Lufkin hardware store tapes, and my Japanese Keson tape, fell within the allowed 0.1 inch of the standard.

I think we can assume that the ordinary hardware-store steel tape and the uncalibrated surveyors' tape fall within the same range of accuracy. Am I off base in this assumption? We used to require that people use USBS calibrated tapes to measure out calibration courses (while ignoring temperature variation) and I think we scared people right away from measuring calibration courses. I am hoping that the relaxed requirement for a non-temperature-corrected (lay it down and go!) cal course will encourage people to lay down courses near the place they're going to measure. Any opinion?

Best, Pete

704 Ainapo Street
Honolulu, Hawaii 96825

Peter S. Riegel
3354 Kirkham Road
Columbus, Ohio 43221

August 6, 1987

Dear Pete:

I am responding to your July 9th letter asking my thoughts concerning the use of a construction tape versus an engineer's tape for measuring calibration courses. I've been in the northwest on vacation so it took a little while for your letter to catch up with me.

In responding to your question you must remember that I was trained as a civil engineer, which in those days (1950's) included a large dose of surveying thus, my response will probably be somewhat biased.

I personally would not feel comfortable in using or recommending the use of a construction tape to measure a calibration course even though I was assured that it met specific accuracy specifications for the following reasons.

1) A construction tape is basically intended to be used for measurement within its total length i.e. up to 50 ft, 100 ft etc., whereas an engineers' (surveyors') tape is built for multiple measurements. It's much easier to hold an engineer's tape for multiple measurements in comparison to a construction tape, including the use a spring scale if desired. The ring on the end of the construction tape is built with enough play so as to hook over a nail or butt against the edge of some object, however, to increase the accuracy many construction people object, however, to increase the accuracy many construction people cut a foot (start the measurement as the one-foot mark), but for multiple measurements this could lead to a potential source of error.

2) Over the years (several decades) engineers' tapes in good shape, are supposed to be within a precision range considered to be 1/5000. l As a general statement when yuou use an engineers' tape you can depend on the accuracy, whereas, this hasn't necessarily been the case for construction tapes. Engineers' tapes can be calibrated and adjusted for ambient temperature and even though Tom Ferguson (1973 calibration course-later destroyed by street re-routing) and I (1977 Ala Wai calibration course) did this for our calibration courses I personally don't think the procedure is necesary for road running calibration courses. Also I consider that calibration courses in the range of 1000 ft to 1/4 mile, or their rounded-off metric equivalents are long enough, which apparently is your thoughts also.

3) I believe as a general statement that engineers' tape usually receive better care than construction tapes, although of course this depends on the individual(s) using and caring for the tape. For example the 100 ft construction tape of mine that you referred to you in your July 9th letter is the same one that I held the end of for my Grandfather (a contractor) when I was 9 years old (1942). l I don't know how old it was at that time and the tape portion itself may not be that old, that I've had it since he passed away in 1964 and it appeared old at that time. The point is that construction tapes could be quite old and built by manufacturers that didn't or don't meet the federal specifications you mentioned, in addition to being abused over the years. Many times construction tapes after years of use are kinked. Even though you could specify certain quality or types of construction tapes, on a national scale, this would be difficult to control, and with engineers' tapes the accuracy has always been implied.

I'm not sure that I have been very convincing in my reasons for using an engineers' tape for calibration courses, but like I said at the beginning my reasons are biased from by engineering undergraduate training. I have no problem using construction tapes for shorter measurements, and when courses follow the SPR the implied accuracy of an engineers' tape loses its advantage. However, the calibration course could be used for a fairly straight measured running course.

Both Tom Ferguson and I feel that the pendulum for the SPR has swung too far to one side and I was happy to see that apparent your thinking is along the same lines, according to your response in regard to the Windward Marathon Validation measurement. Tom and I were considering submitting an abstract for a paper along these lines for the Honolulu meeting in December, but I haven't seen Tom for over three weeks so I don't know if he wrote you about this. I'll be returning to Honolulu for a few days next week, at which time I'll contact him.

I'll be looking forward to meeting you next December in Honolulu and attending the conference as time allows.

Sincerely,

Gordon L. Dugan

The Athletics Congress of the USA

The Governing Body for Athletics in the United States including Track and Field, Long Distance Running and Race Walking for men and women and boys and girls at all age levels.

WAYNE B. NICOLL
3535 Gleneagles Drive
Augusta, Georgia 30907
(404) 860-0712

May 21, 1987

Peter S. Riegel
3354 Kirkham Road
Columbus, Ohio 43221

Dear Pete,

Some of the thoughts in this letter do not relate directly to course measurement so I will copy to several others for input.

Here is a certified split package submitted to me by AC Linnerud. AC is looking for guidance since I earlier had expressed my concern over producing too many additional certificates for split points. I have included a copy of the certs he prepared for each split.

I suggest we use a simple chart to organize the split information, reduce it and put it on the master map for the course. Until we discuss this further, I am going to ask AC to lay it out similar to this. Laying this out raised an interesting question. Some certified splits such as the 20K mark on this course are separated by more than one tenth of the stated distance course length, and probably should not be eligible as a legal loop course. (See chart attached)

Also related to certified split operations, I learned from Ken Young while we were in Rockville, that he has been allowing records taken on splits from a single running watch. The procedure has been to add one second to the recorded time. Jack Moran has an article in the May '87 issue of Road Race Management on the subject. Jack uses two stopped times on certified splits but he interpolates for records, which I question in terms of acceptability. I think certified splits should have at least one stopped time, a positively related bib number to the stopped time, and verification that the timing device was working correctly. That verification needs to be recorded and included in the records application documentation. It is definitely more difficult to capture times and bib numbers at certified splits on a long road course than when the course is run on multiples of a standard distance loop.

I was in the process of preparing a TACTIMES Race Director Guidelines Series sheet on operation of a certified split point so I was pleased to see Jack Moran's article. I think we should determine our timing and recording standards before I finalize that TACTIMES input.

I would appreciate any input and ideas before I finish the article.

Sincerely,

Wayne B. Nicoll

CERTIFIED SPLIT INFORMATION
SE Masters 25K
Raleigh, NC
NC86017ACL

Distance	S/F Distance	Split Elevation	Drop(M/KM)	% Sep	Exact Location
5K	8850'	460'	-5.791	53.95	On S side of Beryl Rd 26'8" E of Easternmost bridge pillar of Belt Line overpass.
10K	9950'	460'	-2.896	30.33	On S side of Beryl Rd. 40'8" S of pole #3151 on N side of road West of Beltline Overpass.
15K	5200'	460'	- 0.71	10.57	On S side of Sullivan Dr. at SW intersection of drive to Central stores. Point is 6'6" N of storm drain on SW corner
20K	12300'	490'	1.905	18.75	On S side of Beryl Road at W of rail tracks. Point is 23'11" N of Northern most metal post of W side of tracks.

WHAT ABOUT SPLITS?

A strange thing has happened in road racing. Not only in Oklahoma, but nationwide..... The vast majority of road races are conducted at the standard metric distances. In fact, according to TACSTATS 93.1% of the certified courses in the United States are the standard metric distances. However, most runners think in terms of minutes per mile, not minutes per kilometer and courses usually contain mile splits rather than metric.

As far as splits are concerned, again most runners relate to miles and not kilometers, EXCEPT when a standard metric racing distance can be called within a race. For example, in a 20 km race no one seems to have problems when metric splits are called at 5 km, 8 km, 10 km and 15 km. Runners can compare their split times at these distances to their personal bests. At Mohawk Park, the start, finish, 5 km, 10 km, 15 km and 20 km splits are within the same general area making it very convenient for those calling times.

It stands to reason that metric splits would be more logical in a metric race. However, most runners cannot or will not relate to non-racing metric distances such as 1 km, 4 km, 7 km, etc. Recently, in 5 km races the TRC has either called or posted the splits for 1 through 4 km. This gives runners evenly spaced and more frequent splits and for those trying to break 20 minutes, it is very easy to figure 4 minutes per km. The 1, 2 and 3 mile splits have also been called.

Because runners are "locked into" miles and mileage, it would not be reasonable at this stage to drop the mile split points even in a metric race. It would make sense to post the other metric distances especially in a 5 km race and post or call the miles. In this manner everyone should be happy.

One other distance the TRC plans to call is the halfway point. This split is very important.

If you have not tried to gauge your pace at the metric splits, you are encouraged to do so. If nothing else, it would be a change. The next time you are in a TRC, 5 km race take your projected finish time and divide it by 5 using this figure for each of your splits. Those of you who insist on the mile splits should simply ignore the metric.

from Joe McDaniel, Editor, ***Oklahoma Runner***

National Governing Body for Athletics in the United States

The Athletics Congress of the USA
200 South Capitol Avenue, Suite 140, Indianapolis, Indiana 46225 (317) 638-9155
Cable Address: ATHCONGRESS IND • Telex 27-332

August 13, 1987

Please reply to
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Road Running Technical Committee
3354 Kirkham Road
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(614) 424-4009 - Office
(614) 451-5617 - Home

In Motion, Inc. - 3456 Ingraham St - San Diego, CA 92109
Att: Lynn Flanagan

Dear Lynn,

I have studied the paperwork relating to the measurement of the Holiday Bowl Heart of San Diego Marathon which you sent me. From the telephone calls that went before, my understanding of the situation is this:

1) You arranged to have the course measured and TAC Certified.

2) The certification paperwork was prepared but for reasons unknown was never received by Ron Scardera for checking. So the course was not certified prior to the race. You had no inkling that something was wrong.

3) Several men ran times that would qualify them for the Olympic Trials - but qualification for the Trials requires that the run be done on a certified course.

4) You would like to see what can be done to see that their runs indeed do get them into the trials, and that's what led to the phone calls and letters.

Since the HBHOSD Marathon will be held on a different course this year, and since retroactive certification is not done, there is little utility in certifying the race course as it is described in the paperwork.

However, for the record I will state that if the measurement data had been submitted to me before race day I would, after some minor questions concerning the course map, have granted TAC Certification to the course. The measurement was competently done and everything was in order.

I hope that this letter is sufficient to persuade those who are building the Trials list to admit your qualified contestants. I am assuming that everything else is in order - that they ran the course as it was described in the unreceived submission and that timing was competently conducted.

In short, I believe the course whose measurements you sent to me was a TAC Certification-quality course, even if it was not actually certified on race day.

If you want more from me, please let me know.

Sincerely yours,

Pete Riegel

xc: Alvin Chriss, Ron Scardera, Carl Brandt

The Athletics Congress of the USA

The Governing Body for Athletics in the United States including Track and Field, Long Distance Running and Race Walking for men and women and boys and girls at all age levels.

WAYNE B. NICOLL
3535 Gleneagles Drive
Augusta, Georgia 30907
(404) 860-0712

August 20, 1987

Dear Pete,

I have read your letter to Lynn Flanagan regarding the Holiday Bowl Heart of San Diego Marathon measurements. It is the same dilemma as Jacksonville (FL). It seems very unfair to disqualify runners who in good faith chose that particular marathon, believing it to be Certified as an accurate course. Yet I deem it equally unfair to let these two race directors get away with sloppy technical preparation of their event.

There is absolutely no excuse for failure to submit a course application for a major urban Olympic Trials Qualifier Marathon. In this case, the buck stops with the race director. I thought the Jacksonville Marathon was going to be a rare exception. Now we have another marathon with several runners who have qualified for the Olympic Trials Marathon on an uncertified course. I think we should press for an immediate TAC/USA policy regarding the Olympic qualifiers and the uncertified course. I would strongly recommend the following as a procedure which would apply to Jacksonville, San Diego and any other event that may fall into the same predicament.

In any footrace that produces successful Olympic Marathon Qualifiers but is discovered to be uncertified due to race management error, the race staff must bear the administrative and financial burden of correcting the situation. The race management would cover costs of bringing in a Road Running Technical Committee member, selected by the RRTC, to re-measure the race course. If the course proved to be long enough and all other aspects of managing the event appeared to be correct, the Olympic qualifiers would be accepted and if previous measurement data was acceptable, the course could be certified for the future. If the course was determined to be short, then the decision of acceptance of the qualifiers would be up to the respective LDR Committees. It might be fair to calculate a time adjustment for the shortness and still accept those runners that would have met the qualifying time on a full length course.

I have copied several people on this as I feel it is a matter we need to address. Possibly we should discuss it with Alvin Chriss.

Cheers,

Wayne

Wayne B. Nicoll
Vice Chairman, RRTC

cc: Chriss, Kardong, McKinney, TACSTATS

PHOENIX CITY MARATHON — VALIDATION AND NEW COURSE

Harolene Walters set a record at the January running of the Phoenix City Marathon and I was selected by Sally Nicoll, Validations Chairperson, to check out the course (AZ86047TK). She knew my dad lived in Phoenix and said if I could get a nice cheap fare to go to it. I figured the whole trip was a bit of a waste of time, since Tom Knight laid out the course and I knew it would be OK. Still, the rules apply to everybody.

I was contacted by the race director before I came to Phoenix about the possibility of laying out a new course while I was there. I would be there only a day but figured out a way to combine the validation and the new course, since 23 kilometers of the new ("1987") course is the same as the old ("1986") course. By the time he contacted me I had already obtained a super-cheap fare to Phoenix and couldn't extend my visit without heavy financial penalty.

I brought the front wheel of my bike with me, since it has my Eliminator tube in the tire, and I didn't want to worry about a flat. I didn't want to borrow a bike because if you don't like what's provided there's not much you can do about it, even if your wheel won't fit. So I rented a bike and put my wheel on it.

Felix Cichocki, who had measured the 1986 course with Tom, picked me up at my father's place in Scottsdale and we drove downtown to the start/finish area. We laid out a 1000 foot calibration course on a quiet, reasonably smooth street (there were a few minor rough spots) and calibrated our bikes. My constant was consistent with those obtained on my 2988.79 ft calibration course in Columbus. We went to the new finish line and met Lieutenant Charles Crawford of the Phoenix Police, who was to protect us that day. He also was knowledgeable about what streets we could use in a pinch, if we needed more room at the start.

I calculated out all the splits based on my precalibration constant, and Felix just stopped where I did, and I recorded his count. We rode the new course from finish to start, and wound up with just half a block to spare! Any more length and there would have been no place to put the start without extensive rethinking, and lots more riding. We knew it would be close, but not that close.

After recalibrating we made the final adjustment, which amounted to a 2 meter addition to the start. I later figured a temperature-corrected constant, and one which was based on the calibrated length of my steel tape, which is 100.01 feet. The cal course thus came out to 1000.18 feet and the final adjustment moved back the other way by 25 feet, which I did later in a letter to Felix.

Since we needed bike transportation for the afternoon rides, and Felix had the van, and only my own ride was required for the validation, Felix was done riding. He drove me to the portions of the old course that connected to the parts of the new course we had measured in the morning, and I measured them.

Once I had completed the other 19 km of riding, plus one off-course of 4 km which lowered my spirits since I was getting tired, we went back and recalibrated and figured up how things went. Naturally, with the competitive aspect of both Tom and me measuring the same course there was a desire on my part to get a value for the old course of less than 42237 meters, but more than 42195. An early rough calculation showed I'd beat this by a couple of meters! Ho HO! Take that, Mr. Knight!

But wait. Later, after some drinks and a big dinner and a few hours sleep I woke at 1 AM full of numbers in my head. I got up and did a full-dress calculation of the whole thing. The new course was a cinch, since we rode it in one shot and had only one constant to use. The validation had three portions measured in the morning with one constant, and three more portions in the afternoon with another constant.

It turned out that I had used my layout constant (which includes 1.001 SCPF) in roughly calculating the validation length, and I should have used the true constant. When I refigured it, I came up with a length of 42279 meters! Since Tom had laid out a nominal 42245 (based on average constant), he'd beat me by 34 meters! Wow! The difference slightly exceeded 0.08 percent.

Now, like a true champion I looked for an excuse. Surely it could not have been superior riding! Some statistical freak must have intervened! What could it have been?

After looking at the numbers and procedures, here's how I figure it happened: Tom used the infamous 16th Street 1/2 mile calibration course when he did his layout. This is a bumpy and trafficky calibration course that is the worst one I've ever seen. It is hard to ride and is far rougher than the race course itself. My own calibration course was a smoother 1000 feet on non-trafficky Adams Street, and its texture is quite similar to that of the race course.

Earlier this year when I compared the 16th Street cal course with a smooth 1000 feet in a parking lot, I got a difference of nearly 20 meters in 10k! But I'd used a folding bike with a 16 inch wheel. Still, it did confirm what Bob Baumel showed us - you will get more counts on a rough calibration course than on a smooth one of the same length.

Also, I figured we could use poor Felix as a yardstick. Tom beat him by 28 meters and I beat him by 13 meters. Using this somewhat questionable comparison, Tom outrode me by 15 meters.

I also lost about 2 meters on 7th Street, when I rode only the extreme right lane, since this was where the runners were confined to on race day. Tom had measured all the way out to the center.

Here's how I break it down:

15 meters due to superior riding by Tom
2 meters for actual extra distance ridden by Pete
17 meters for difference in calibration course roughness

The difference is not due to any single mistake. It's uniformly distributed along the course, and not concentrated in any of the 6 segments I measured. The splits we found agreed consistently with Tom's splits.

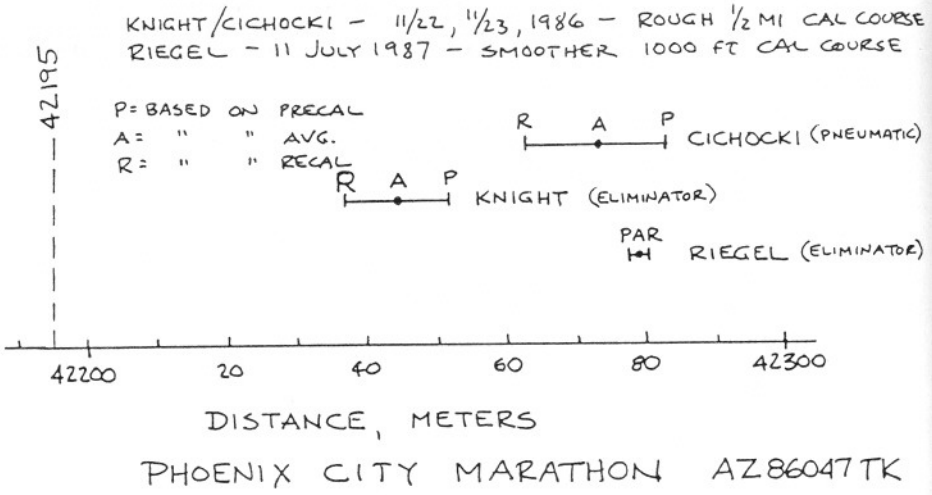
Calibration variation of both me and Felix was tiny. Felix's constant (pneumatic tire) changed only 4 counts per kilometer and mine (solid tire) changed less than 1, for a temperature change of 30 degrees. No apparent effect of calibration change accounts for any difference.

It's possible that the extreme heat affected my ride in some way. It was in the low 80's when we started at 7:30 AM, and it hit 100 by 10:30. It was 106 by noon and hit 110 by 3:30. Felix had brought three coolers full of every cool drink known to man, and between the three of us we nearly polished it all off. I never drank so much in my life. By the way, a mixture of half tea and half lemonade sure slides down nicely - this is one of the concoctions Felix brought along. A Southwestern delicacy.

We made a lot of stops in the layout process in the morning, but so did Tom when he laid out his course. No apparent effect here.

It is heartening to note that if I had laid out the course based on my ride, and Tom had validated it based on his ride, the course would have survived by 9 meters or so. So the system still works, even with bad riding and variable calibration course roughness.

Pete Riegel



PHOENIX CITY MARATHON AZ86047TK

IT'S A FREE COUNTRY, ISN'T IT?

I recently had a phone call from a race director who wondered whether he could send his measurement data to someone outside his own state. While he did not specifically register a gripe with his state certifier, he said that his race's sponsor had a "problem" with the RRTC guy in his state and preferred to work through someone else.

Oh-oh, I thought - another of those political hassles. I told the guy that if a real problem existed he could send his courses somewhere else, but that first I wanted to know exactly what the problem was so that it could be corrected. At this he got a bit hot, and replied that he thought it was a free country, wasn't it? Why couldn't he send his courses wherever he chose? I replied that each of our certifiers was chosen because he was the best in the area he served, and that unless there was a clear problem he was entitled to deal within his state as he saw fit. I said that to do otherwise would encourage a chaotic state in which the state certifiers would not have good knowledge of what was going on in their areas.

He was not happy, but he grudgingly accepted the idea that if he wanted to go outside his area for certification service he'd have to come up with a better reason than an unspecified reluctance to deal with his state certifier. I have not heard anything further.

This brings up the need to restate a guideline for certifiers. It is not the job of the certifier to make judgements about the personality of the measurer or the quality of the race organization. There are lots of races, conducted on certified courses, that are not good races. Some possible sins might be:

1) The race conflicts with another race, possibly a TAC race with whom the certifier has been working.

2) The organizers have a bad track record. Their finish lines are bad and they may be putting on overpriced and underquality races.

3) The course is not safe.

4) Personal animosity or business rivalry exists between measurer and certifier.

5) The race director will not obtain a TAC sanction for his race.

The list can be long, but none of the above reasons are good enough to delay prompt certification service. It is our job as certifiers to deal only with race course measurements, and to ignore all other aspects of the race. If the measurement package is complete and correct the course should be certified without delay. Once we start to allow our personal likes and dislikes to interfere with the service we provide, we are headed for trouble.

There is nothing wrong with expressing strong opinions regarding the conduct of a measurer's business, but it must not affect the service we give. Certification must not become a club we use to whip people into line.