THE ATHLETICS CONGRESS TAC USA

Road Running Technical Committee

MEASUREMENT NEWS

July 1987 Issue #24

Canada's loss is England's gain as Gaby Duguay (above) moves to Wales.

MEASUREMENT NEWS

#24 — July, 1987

LONDON MARATHON MEASUREMENT

Your Editor was invited, as an AIMS measurer, to check out the course of the 1987 London Marathon and to ride the lead vehicle to see that the runners followed the measured path. During the course of this activity I got the chance to meet and talk with John Disley, Chris Brasher and others who are active in international race organization.

John Disley had established a tentative course which he believed to be very close to the right distance, and he gave me a map which made it easy to follow the course. Because of extensive roadworks in the West India Docks and the Isle of Dogs, some of the curbing in place during measurement and on race day consisted of large square timbers. Indeed, one short piece of road was unpaved (but firm) when we measured it and paved by the time the runners ran it. By the time you read this an exact reproduction of the course as run on race day would be extremely difficult. And as for the courses of yesteryear, they are lost in the mists of antiquity.

On the morning of May 3 Max Coleby and I calibrated our bikes on an (EDM established) 800 meter calibration course on The Mall, a traffic-free street that extends from Admiralty Arch to Buckingham Palace. I had to do some fast talking to stay out of trouble with a Park Policewoman who didn't appreciate me riding my bike against the traffic (which was unnecessary anyway since the cal course was laid out on both sides of the road - after being lectured I rode legally thereafter on calibrations). We then drove to the start and met the two police motorcyclists who were to be our protectors. John led the way on a small folding bike that turned out to have a leaky back tire. At each stop, while Max and I did our data writing John got busy with the pump. Because of the soft small tire John had a very difficult ride.

I asked Max to figure out where all the miles and 5k's should be, and then I followed him, stopping at (and checking) his marks. When we got to the Tower of London we encountered a stretch of about 400 meters of cobblestones (covered with carpet on race day), and were forbidden to bike through the Tower anyway. So we restarted on the other side of the Tower and finished up the ride.

The last few miles of measuring on The Mall were fun because the Guard was changing (or they were Trooping the Colors - I never got this quite clear) and the streets were lined with people. It didn't take long to realize it wasn't us they were watching. Later, after dinner, we steel-taped the cobblestones at the Tower.

While figuring up my numbers I discovered that I had made one of the most fatal of mistakes - I had surely transposed a number, and in the worst possible place. At my recorded count for the finish line! After doing a numerical examination of my measured distance and Max's, and a look at

whether Max could have transposed, and after going out and pacing off the distance, I came to the only reasonable value that the transposition could have. The transposition only came to my attention because Max and I differed by 10 meters in the interval from mile 26 to the finish - and this is one easy straight shot.

After we figured up the numbers we found that we needed to find another 50 meters, so next day I went out and checked out a place that John had discovered. Instead of taking the short way around a certain block on Narrow Street we took the long way, and got back the 50 meters we needed. I did not calibrate the bike this day, assuming that because of the solid tire and the short distance any errors would be inconsequential.

Agreement between Max and me was OK, the difference being 22 meters. Because of his sacrificial-goat position he was at a disadvantage.

For you figurers, here's our overall-ride data - Note - both Max and I were using bikes with a British solid tire that, as you can see, changed its calibration very little as the day went on. It's a dandy tire, but is, unfortunately, no longer being made.

	Pete	Max	
Precal	7431	7414	
The Mall	7432	7416	
800m	7431	7415	
6:20 AM - 44F	7431	7414.5	Note: complete data is available. Send
Postcal	7426	7416	SASE to Pete Riegel
Noon - 50F	7429	7416	
	7430.5	7416	
	7430.5	7416.5	
Counts on Course	387964	387401	

Added distance steel-taped at Tower: 388.95 meters = 389 meters

Distance added at Narrow Street to make up shortage: 52 meters

Distance added to start: 3 meters.

Astute figurers will find that we added only 21 meters as a short-course prevention factor, rather than the 42 we would add in the US, and which I would have added left only to my own devices. International standards are not yet fixed in concrete, and the 21 meters seemed to come close to satisfying the requirements.

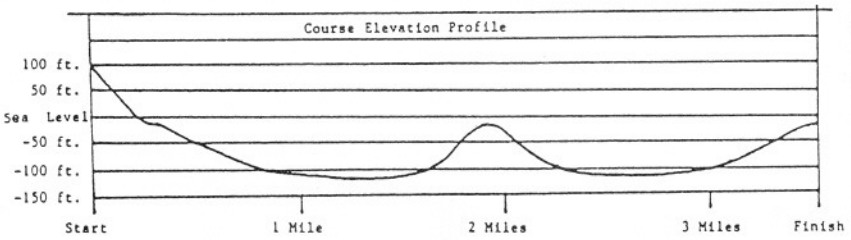
Because the surveyor's certificate for the 800 meter cal course had not yet arrived by the day before the race, John helped me do a quick-and-dirty steel taping of the cal course, and we came up with 799.82 meters. This was close enough to 800 to convince me that the surveyor's EDM figure of 800 meters was the correct value to use.

MYSTERY COURSE CONTEST! VALUABLE PRIZE!

In the June issue of Ultrarunning Magazine race directors were urged by Gary Cantrell to make an effort to create courses that were a bit special and reflect local character. Gary opined that the plethora of flat 10k's available was a bit dull compared to the good old days of non-standard courses that had a bit of tradition to them.

Gary is known to ultrarunners as the director of the Strolling Jim 40 miler (actually 41.2 miles and named after a once-famous but now dead horse), the 108.6 mile Idiots Run (one giant loop with lots of hills, regrettably now defunct), and other journey runs near his home in Tennessee. His races are refreshing experiences and I urge you to try one when you get a chance. You'll come away very glad you went.

There's one race in the US that took Gary's advice genuinely to heart. Here's its profile. You'll notice that it's not an ultra, but it is a new US course. And, as Gary advises, it "gives a real taste of what (its) locale is all about".



One of the satisfactions of being RRTC Chairman is that I get to see maps of all the newly-generated courses. This one's venue is a real puzzler - I was stumped for a long time until the measurer gave me a hint.

Since UR chose to humiliate RRTC with that awful LaRochelle metric puzzle (tricking us into 2 out of 3 wrong answers), here's a chance for us to get our own back. This puzzle has also been sent to UR for their next issue, which will be coming out about the same time as this MN. The first correct answer I receive to the locale of the course with the above profile will receive a used-but-clean, size medium, t-shirt from the Grandview Pumpkin Run, postpaid.

This valuable prize, from my personal wardrobe, is in keeping with Gary's philosophy. The Pumpkin Run is a local 5k/10k run that's been done each fall for years and years, and the courses are widely believed to be short. Not terribly short, but enough so that lots of people have their PR's there. I live a couple of miles from the course, but have so far resisted the temptation to measure it and find out for sure. Why not? Well, nobody asked me and it's kind of fun to run the course just for the hell of it. The length of the course is a bit of a local joke, so why spoil it? It's pretty and fun and everybody has a good time.

To:
Pete Riegel
3354 Kirkham Road
COLUMBUS, OH 43221

after July 1st { 32 Rees Street
Gelli, Rhondda
Mid Glam, South Wales
Great Britain CF41 7NF

May 25, 1987

Dear Pete,

I'm sending you some photos of what I wear while measuring, including a signboard on the front of my bicycle. I think I'll have less chances of getting hit and more chances of having motorists slowing down to see what I'm doing rather than trying to run me off the road, because they consider I'm not riding where a cyclist should. I dress in bright orange and I lend the accompanying measurer a hunting vest (which is by nature a fluorescent orange colour) and two home-made gaiters, with a signboard he can attach to his back bicycle rack. I always ride in the front and the assistant in the back. We still take all the precautions necessary to try and stay alive, but I belive my way is safer than Dr.A.C. Linnerud (as pictured on the cover of MN).
(Refer to pages 22 and 29 of the Procedures manual, Etiquette and Safety)

* * * * * * *

By the way, my family and I will be moving to South Wales (Great Britain) on July 9, 1987. My wife's family is all over there and she's been in Canada for 14 years. Although she's seen them every two years approximately, she's lonely and we think we can find some work and be able to live there. We might stay or come back. Could be 2, 5,10 years.

In any case, I'm bringing my measuring equipment with me and I would still like to receive MEASUREMENT NEWS, On the latter, tell me how much it would cost to receive it in Wales; I'll gladly pay. I'LL try and get to measure some courses and find out how things are run over there. Two years ago I offered my services to three race organizers and none were interested in getting their courses measured by me (my offer was by mail, and I had told them I was going to be in the area for 1 ½ months in 1985). I doubt if you will need information from me as there are no major races organized in Wales and I doubt if English organizers will require my services. I really enjoy MN and especially the last three issues where there is more information on international measurements and where the SPR lies.

Regards, Gaby

In Canada, John Craig of the Ontario Track & Field Association, 1220 Sheppard Avenue East, Willowdale, Ontario M2K 2X1, is writing up the new Canadian Procedures on Road Race Course Measuring. If he sends me a copy, I'll send you one.

THE ATHLETICS CONGRESS
OF THE USA

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May 13, 1987

Chris Brasher
John Disley CBE - PO Box 262 - Richmond, Surrey - ENGLAND TW10 5JB

Dear John & Chris,

I'm back home, safe, sound, whole and well and wanted to express to you my heartfelt appreciation for the hospitality you so unstintingly lavished upon me during the 1987 Mars London Marathon. It was the finest introduction to Britain that I could possibly have had.

At dinner Chris asked me to expound a bit on the use of a full 0.1 percent as a "short course prevention factor" or SCPF as I shall henceforth call it. As you know, on the layout of the London course we used 0.05 percent, or 21 meters.

The size of the SCPF depends on its intended function. If its purpose is to just give a reasonably good feeling that the right thing has been done, then certainly 21 meters should suffice.

In the US the SCPF is intended to defend a course against a remeasurement by an expert. In this case the expert may ride a bit straighter than the amateur who laid down the course, and if the full 0.1 percent is not used the course can be found short.

Before AIMS or IAAF decides on the size of any SCPF they should question whether they ever intend to set up a records system with "teeth" in it - that is, one in which courses are open to inspection by other interested parties, especially when an important record has been set. If no remeasurement is intended then 0.05 percent will certainly suffice. But press skepticism is likely.

An example of press skepticism is Beijing. I know that John must be as puzzled as I am at what happened there. He measured it, he saw it, and several of the top runners ran out of their heads giving an impression of incredibility about the whole thing. If a WR had happened there, instead of just a lot of very fast times, I believe the press would howl for a measurement. This, of course, would be near-impossible given that no formal agreement or structure for such remeasurements yet exists.

I made a couple of mistakes in my measurement of London. Fortunately for me there was enough time and supporting data for me to find my errors (all of them?) and correct them. But I might have gone on in ignorance never knowing I was wrong. If a WR had been set at the race I personally would have welcomed a remeasurement, although as your loyal laborer-for-hire I would have kept shut about it unless asked. As I recall, at Chicago Bob Bright, on the heels of some record or other, asked for and got a remeasurement the very next day. And his course held up.

In the US we don't worry about our courses being shot down by a remeasurement because the SCPF is adequate. It provides safety for all us "experts" against each other.

As the best example I can think of - suppose Max Coleby's measurement of the 1987 course was the one you considered as definitive, and you then added 21 meters to it to make a "safe" course. Ingrid runs 2:19. Then - after the race, when it's too late to fix things - I come over, and voila! I find the course 22 meters shorter than Max got it, and your "marathon" measures out to 42194 meters, not enough to be definitively short but enough to get people muttering. And my measurement of the 1987 course <u>was</u> 22 meters less than Max's.

Max is not a bad rider. It is just that 0.05 percent is not enough of a SCPF. Measurers in the US commonly disagree by the amount that Max and I disagreed. When it happens we crow over each other about it, but 22 meters in a marathon is a trifle given the means we are using to measure.

Again - if you do not ever see a possibility of someone checking, then <u>any</u> SCPF will do, since it then comes down to simple belief or nonbelief that the organizers did it right. But if you someday envision a procedure to check those very few courses at which records are set, then a SCPF of 0.1 percent, for bike measurements, is needed to keep things safe.

Given that AIMS intends to expand its operations I see it getting more and more like the US, where we have many measurers and many courses. Because we recognize the possibility of human error we have a validation procedure that <u>must</u> be applied when a record is set, else the record will <u>not</u> be recognized.

Our top race directors know this, and they hire the best measurers they can get for the important courses. New York City <u>could</u> legally be measured by a first-time measurer, and certified on that basis. And he would have about an 85 percent chance of getting it right, if past experience is a guide (based on validations of 50 courses). But that's not enough safety for Fred Lebow, so he hired the big guns to come in to do his course. We did it, and when John came over to check it he got the course at nearly 70 meters oversize. While I think that some of that was due to riding that wasn't as tight as ours (American conceit) I am sure that the course was within 10 or 20 meters of what John got.

Now, the question arises - how much is too much? Well, I prefer to think of it the other way. If I shave distance off the course out of misguided sympathy for the runners, I may well have to watch somebody come in and find my course two meters short. I can argue and cry, but I had my chance to make it safe, and if I elected to use less than that full 0.1 percent I did so at my peril. The runner does not get his record, and I doubt he will thank me for trying to shorten the course.

Best regards to both of you. I am delighted that we met, and I hope we can get together again.

Pete

xc: Nicoll, Baumel, TACSTATS, Galloway, Young, Hersh

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5 June 1987

Andy Galloway
Box 10106
Hamilton
NEW ZEALAND

Dear Andy,

Many thanks for your excellent Newsletter No. 35 dated May 1987. A number of points:

1) The next Board Meeting: I did talk to Bob Dalgleish at the London Marathon and suggested that he'd get a far higher attendance if the Board Meeting was in Rome at the time of the World Championships. People like Hiroaki Chosa, Fred Lebow, Bob Bright and myself - to name a few - will be in Rome and will be reluctant to make another trip so soon afterwards.

2) Measured Courses: Just to let you know that every year the London Marathon course is remeasured by an IAAF/AIMS approved course measurer. This year it was Pete Reigel from the USA and he also rode in the lead car to verify that the runners ran the course that was measured. We had some very interesting discussions with Peter and he has now convinced me that the contingency allowance of 0.05% should be increased to 0.1%, i.e. course should be measured 42 metres long. He has written a good letter on this. I have also received your letter of May 22 and from my reading of your second paragraph, it appears that you have got hold of the wrong end of the stick.

The standard that has been accepted by the IAAF Sub Committee on which Bob Dalgleish, Allan Steinfeld and I sit is that the course should ideally be 0.05% over length, i.e. 21 metres. This year, London was exactly that - or as exact as the measurers could determine.

While over here, Pete gave us very good reasons why a course measurer such as himself would not be 100% certain that the runner had run the full distance during the event. The reasons are the conditions are different because of parked cars, crowd control barriers, crowds, policemen, etc. So, I asked him to write a paper on it and you have had a copy of his excellent letter of May 13. So, he suggested that the contingency should be 0.1% which is the figure which was originally suggested by Allan Steinfeld to the IAAF Committee.

/Cont'd....

As I understand it, the mistake in your letter is to say that the AIMS error factor is 1:1,000. The AIMS recommendation is that the course must be no less than 42,195 metres and no longer than 42,237 metres. So, all of us have split the difference and tried to get a course which measures 20 to 30 metres long - as Rotterdam turned out to be. Pete's suggestion is we should aim to measure the course 42 metres long and that was the idea of his letter. It is a discussion document for the next Board meeting.

Yours sincerely,

Chris Brasher
Vice President AIMS

PS Some additional interesting statistics from this year's Mars London Marathon. The number of runners finishing under 2 hours 30 was 161; under 3 hours was 2,483; under 4 hours was 12,933 which we believe to be a new world best; the total number of finishers after getting rid of bandits, etc. was 19,545. The total number of UK applicants was 76,699 and we estimate that the total number of applicants worldwide was approximately 86,000.

cc: Bob Dalgleish
Pete Reigel
John Disley
Allan Steinfeld

(Dictated by Chris but signed in his absence.)

704 Ainapo Street
Honolulu, Hawaii 96825

May 8, 1987

Wayne B. Nicoll
3535 Gleneagles Drive
Augusta, Georgia 30907

Dear Wayne:

I am writing in hope of clarifying some points regarding the controversial measurement of the Honolulu Marathon course on December 6, 1986 by AIMS' representatives, Andy Galloway (Secretary for AIMS, and Director of the Hamilton Marathon in New Zealand) and Len Wallach (Director of the San Francisco Bay to Breakers Run). I waited in answering your January 20, 1987 letter to Pete Riegel (cc to me) in the vain hope that Tom Ferguson and I would receive a copy of the December 6th measurements from AIMS' so that we could compare them with the 1983 measurements that were submitted for certification. Tom Ferguson has filled you in on most background details, including the article in the local newspaper alleging the Honolulu Marathon course was measured by AIMS to be approximately 130 meters long. Subsequently, Andy Galloway stated in his February 20, 1987 letter to Pete Riegel (March 1987 Measurement News) that "The Honolulu Marathon course was 355.75 feet overlength" -- "over and beyond the 1 in 1,000 error factor." Before I commit on this point perhaps I should present some additional background data.

The 1983 Honolulu Marathon course certification was submitted by Giovanni Bartolini, our most experienced certified course measurer during the past few years. Giovanni rode one bicycle and William Williamson, former Honolulu Race Director and Honolulu Marathon Association (HMA) President and board member for several years, rode the other bicycle. Together these individuals have run in excess of 15 Honolulu Marathons over this same course in competitive times, in addition to numerous other races over various portions of the marathon route. Jim Moberly of the HMA, who has run all the Honolulu Marathons, also assisted in the measurements along with David Benson, who coordinated the traffic control during the measurement as well as at that time being the Director of the Honolulu Marathon. Phil Olsen, a very active member of HMA and Course Marshall of the Honolulu Marathon also helped coordinate the 1983 measurement.

Thus, the measuring cadre was very familiar with the Honolulu Marathon route, including the shortest possible route (SPR), within the coned-off lanes.

As Tom Ferguson pointed out in his March 10, 1987 letter to Bob Baumel, I (Gordon Dugan) was aware of the impending AIMS potential measurement of the course through discussions with Jim Moberly, a Board Member and statistician for the HMA, which is a member of AIMS. I gave Jim a copy of the 1983 certification data approximately three weeks before the December 6th measurement of the course (apparently the HMA had misplaced their copy). Jim was familiar with the one-half mile Ala Wai certification course, which I submitted to Ted Corbitt and obtained certification in 1977. Tom Ferguson, among others, helped in the measurement of the certification course. The certification course measurement was conducted by using a 100-ft calibrated steel engineer's tape, with a spring scale and attached thermometer for temperature corrections. The course is along the sidewalk adjacent to the Ala Wai Canal. The steel tape could be stretched along a straight line but because of benches and three stairs a slight deviation route has to be taken when riding a bicycle. In 1977 the most popular course measuring instrument in Hawaii was the surveyor's wheel, which could be pushed along the calibration course in essentially a straight line, however, with a bicycle extra clearance has to be allotted for the pedals.

A careful bicycle rider can maintain a fairly straight line with proper positioning of the bicycle pedals adjacent to the benches and stairways, but even if one were to deviate as much as 2-ft around the three stairs, starting 100 ft from the stairs, a calculation using high school geometry would show that the extra distance added to the hypotenuse of the six triangles (in and out of three stairs) would amount to less than 1 1/2 inches, which is less than one-half a count of the Jones Counter. Thus, it may appear that one is adding considerable distance by slight deviations around the stairs along the Ala Wai, but in reality the additional distance is negligible, with reasonable bicycle riding. Tom Ferguson and I considered that the slight deviations provided a factor-of-safety, particularly for the less adept bicycle rider; however, today's 0.1% factor-of-safety negates this aspect.

Along a straight sidewalk one can observe if a straight line is being followed, whereas on some paved road courses judgment is required, unless a straight curb or shoulder is encountered. Starting over a year ago bicycles have been banned from riding on the Ala Wai sidewalk. Thus, most of our certification measurements are now being conducted on the Kainalu Street-Kailua Avenue one-mile calibration course, on the Windward (Kailua) side of Oahu.

At the time (November, 1986) Jim Moberly obtained the 1983 certification data he wasn't aware whether AIMS' representatives only wished to check the certification data or actually measure the

course. Later he approached me about the possibility of borrowing my bicycles for the course measurement, if required. AIMS' representatives decided to measure the course during the Honolulu Marathon Wheelchair race, which was scheduled to be held the day preceding the Honolulu Marathon. The choice of the Saturday, December 6th wheelchair race date had the advantage of keeping one lane of the Marathon course open along the entire marathon course. However, during race day of the Honolulu Marathon a greater portion of the roadway was open to the runners, which would add to the distance of the AIMs' measurement, especially when traversing Diamond Head hill in both the outbound and inbound direction. It must be noted that during the 1983 certification measurement a few parked cars were around the Hawaii Kai Loop of the marathon's 16th to 17th mile which may have added slightly to the overall 1983 measurement distance.

At approximately 10 p.m. on Friday, December 5th, the day preceding the AIMS' measurement, Jim Moberly stopped by and borrowed my two bicycles and also asked if I had a 100 ft engineers tape. Since I didn't have access to one of the University's (Department of Civil Engineering) engineering tapes at that time of night I loaned him my 100 ft steel construction tape.

Unfortunately, the details of the calibration and measurement results of the course from this point on are from 3rd-party (at best) viewpoints and surmising some apparent facts (at least to me).

According to Jim Moberly the AIMS' team checked the length of the calibration course with my 100 ft steel construction tape starting sometime after 4 a.m. in the morning of December 6th and found the one-half-mile calibration measurement to be within the expected accuracy, even though a construction tape is not meant to measure within the range of precision expected of a steel engineer's tape used for surveying. Apparently, the calibration runs were made along the sidewalk where some deviations were encountered and also in the street adjacent to the calibration measurements. Jim Moberly accompanied the AIMS' representative during the measurement of the marathon course. Andy Galloway rode my bike and Len Wallach rode the bike that is adjusted for my long-legged son. Apparently Andy is approximately my size so the bike adjustment was probably satisfactory, but the bike used by Len must have been very uncomfortable during the ride since his legs don't appear to be that much longer than mine. I certainly couldn't sit on such a high seat and ride the bicycle properly.

After the course was measured the AIMS` representatives contacted Giovanni Bartolini and borrowed his 100 ft engineers steel tape and re-checked the measurement of the one-mile calibration course Saturday afternoon, which apparently proved to be satisfactory to them. Giovanni was present during the afternoon measurement of the calibration course but was not consulted in anyway by

Andy Galloway or Len Wallach. I don't, as yet, have access to AIMS' measurements of the course. Thus, I am unable to try to ascertain if the additional 355.75 ft that AIMS' measurements produced was a systematic error, a calculation or transcribing error, a measurement error over a given intermediate distance, or a combination thereof, by either the 1983 Honolulu team or the AIM's team. These potential sources of discrepancies are complicated by what constitutes the SPR for the course.

In both the 1983 Honolulu team measurement and the AIMS' measurement both bicycles followed the route together. This procedure tends to produce closer measurements since the same riding route is generally followed, and it has the advantage of checking for discrepancies at intermediate distances (one-mile intervals for the Honolulu team). However, in my opinion, a more reassuring method is to have at least two different measurers using different bicycles and counters, conduct the measurements when they are not in sight of each other.

I find a discrepancy in Item No. 4 of Andy Galloway's February 20, 1987 letter to Pete Riegel (March 1987 minutes). He states that the footpath (actually a concrete sidewalk) ... "is absolutely impossible to carry out a straight ride" ... I believe I've answered his comment by showing that even with three 2-ft deviations in 100 ft, the added distance would be less than 1 1/2 inches, and with careful riding the deviation should not be more than three 1-ft deviations. It is certainly within the accuracy of one-count of the Jones counter. Thus, his statement is without merit.

Secondly, Item No. 4 states that the calibration rides were along the very edge of the roadway. The edge of the roadway, actually part of the edge-of-the-road drainage gutter is over 10 ft from the terminal calibration points next to the concrete sidewsalk. However, the section along the street in this location always has parked cars on Saturday morning, because parking is at a premium in the Waikiki area. Because of traffic the street (Ala Wai) does have no-parking regulations during the weekdays (Monday through Friday -- 6:30 a.m. - 8:30 a.m. and 3:30 p.m. - 5:30 p.m.) for set hours, but from Friday at 5:30 p.m. to 6:30 a.,m. Monday morning street parking is allowed. Consequently, these roadway measurements must have been conducted on the street side of the parked cars, a distance of approximately 20 ft, with tight riding, from the terminal points of the one-half mile calibration.

A bicycle rider could only go one way with traffic along the roadway. A reverse direction for calibration, as is normally the case, would have to be done against traffic, a dangerous procedure along this stretch of the roadway, and especially since the calibration was carried out in darkness, aided only by streetlights. The AIMS' measurement of the course commenced a relatively short time after the 6:30 a.m. start of the Wheelchair Marathon start so that

they could take advantage of the streets along the route, in busy Honolulu, still being coned-off.

At this point I'm assuming that the roadway calibration was conducted by eye-balling the terminal points of the calibration course, at least 10 ft, but undoubtedly 20 ft from the official terminal points. Unless a transit or similar optical/surveying device was used (which apparently was not the case), or right angles were measured (which may be difficult, depending on the position of the parked cars) I'm forced to conclude that eyeballing was resorted to. I personally would not accept such a procedure for calibration submittal; however, I do not believe an error in calibration could account for the extra distance they claim. If the one-half-mile Ala Wai calibration course created some doubts then the Kailua one-mile calibration course could have been used, or calibration "on-site" by claiming a 300 to 500 foot distance.

At this juncture in time, and based on discussions I've had with other individuals involved in the matter I'll have to conclude that a systematic error may have occurred by the method used to calibrate the bicycles, and undoubtedly extra distance was added in both directions along the Diamond Head hill section. In addition, even though Andy Galloway and Len Wallach have run the Honolulu Marathon course they certainly aren't as experienced in running the route as the 1983 Honolulu team were, who took a considerably longer time to conduct the measurements.

The 1983 Honolulu team used their own bicycles which were adjusted for their riding styles, whereas, the AIMS' team used bicycles that weren't necessarily adjusted for their comfort. It should be obvious that even for an experienced bicycle rider, the use of an unadjusted bicycle could at least subtly impair accuracy; however, according to Jim Moberly the two AIMS' measurements were quite close.

I didn't intend to write such a long letter, but I felt it was necessary to "clear the air" at least from my viewpoint. If I am provided with a complete set of AIMS measurements Tom Ferguson and I will endeavor to scrutinize the data to see where the discrepancies between the two measurements occurred. I still have the same front tires on both of my bicycles, and albeit the wear on the bicycle I use for daily commuting is worn slightly from last December, it should be at least theoretically possible to see how close another set of calibration measurements would be to the set AIMS used.

In conclusion, from both Tom Ferguson's and my viewpoint we feel we were very open and cooperative with the AIM`s measurement of the Honolulu Marathon Course by providing the original 1983 certification submission and the two bicycles, yet all we received was a statement

in the newspaper that the course was 130 meters too long. This appears to be a cavalier attitude on AIM's part and indicates we were convicted without a trial. If the course is too long it should be adjusted accordingly, but not just based on the findings of Andy Galloway and Len Wallach. As matters now stand I will personally have to conclude that the certified 1983 Honolulu Marathon measurement is an accurate representation of the actual distance, unless proven otherwise by submission of the AIMS measurement data or a remeasurement by the HMA.

Sincerley,

Gordon L. Dugan

cc: T. Ferguson
P. Riegel
B. Baumel
G. Bartolini
Jim Moberly
Honolulu Marathon Association

COURSE IDENTIFICATION NUMBERS

This message is simple - please don't assign any 1985 numbers to courses you submit in 1987. I have done it in the past, and nobody complained, but in the interest of having the number reflect the date the course "goes public" a number should be assigned that reflects the current year.

This may seem picky but it will help us sort things out when we have to. Within the first three months of a given year we would like to be able to assume that we will see no more certs arrive bearing the previous year's date. This way we can assemble a complete list of courses for the previous year without waiting two years to do it

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 26, 1987

Gordon Dugan
704 Ainapo Street
Honolulu, Hawaii 96825

Dear Gordon,

Thank you for your letter of May 8. I was glad you copied to Pete Riegel and Bob Baumel since the matter really falls within their "chain of command". I understand why you wrote to me dince I had commented unfavorably on the lack of AIMS protocol and measurement data.

You have taken some steam out of my earlier position that AIMS had a protocol problem. I did not know you had been contacted via the Honolulu Marathon Association (HMA). Since they are a member of AIMS, they are subject to having an AIMS measurer check the marathon course. Since you were drawn into the project by the request for bicycles and a steel tape, it would appear you or Tom had the option of being present at the measurement, either as riders or observers.

As am AIMS measurer I am aware that a report is prepared after the measurement and copies are forwarded to Allan Steinfeld and Andy Galloway, the secretary of AIMS. I personally send one to the race director along with a formal AIMS certificate verifying the distance. I would assume that HMA received a copy of the report. I'll send a copy of your letter and my response to Allan and perhaps he can come up with a report.

I am rather surprised by the Honolulu running community's reliance on so few calibration courses. We have been laying half-mile calibration courses anywhere we need them. I can travel throughout the southeast, calibrating at one location and recalibrating at another. We also seem to find a need to re-measure our race courses more often. It is difficult to believe that both the Windward and Honolulu Marathon courses still have 1983 certifications in effect. You should be able to relieve your calibration course problem by taking advantage of the new 1,000 foot calibration course policy. With Pete's approval, I am now authorizing any course measurer to steel tape a 1,000 foot course, one time, no temperature correction. He just indicates on the application that he laid a 1,000 footer and if we ever validate his course we will verify his 1,000 foot course or lay a new one. I have laid several already and have been pleased with the results. It makes the measurement easier and faster. A sloppy calibrator will magnify his errors and this produces a longer race course. The restrictions are quite clear. The calibrated bicycle cannot be transported by motor vehicle to a distant race course.

Your lack of active measurers should be of concern to you. The only name I see on up-dated certified course lists is Bartolini. I would think you would have several active measurers in the area. We solve that problem with instruction, we do a lot of "one on one" teaching while conducting a measurement and we are growing quite proficient at conducting both outdoor and indoor clinics. Maybe we should consider doing a clinic early in the week of the TAC Convention. If you like that idea, let me know.

In trying to analyze why the Honolulu Marathon appears to be long, I would suspect the possible differences in the lane restrictions between the wheelchair run and the peoples run. I don't think the calibration course or the unfamiliar bicycles would make that much difference. There also may be other obstacles that are placed on the day of either race that were not there on measurement day.

I know Len Wallach. As a prominent race director and program promoter I would doubt he spends much time on course measurement. Usually those types of busy people cannot concentrate sufficiently to conduct a tight measurement. I suspect if I met Andy Galloway, I would like him and many of my past concern would dissolve. I suspect we are dealing with a yet unpolished international procedure that in time will become quite acceptable and routine.

Finally, I agree with your present position. Continue with the same course at the same distance until a re-measurement subject to your scrutiny is arranged or you have seen some substantial measurement data that would confirm the AIMS findings.

Sincerely,

Wayne B. Nicoll

cc: Allan Steinfeld
Andy Galloway
Bob Baumel
Pete Riegel
G. Bartolini
B. Honikman

2000 N. E. 4th Way
Boca Raton, Florida 33431

May 28, 1987

Dear Al:

In your January 1987 issue, Mike Tymn and Joe Burgasser questioned the validity of Jack Foster's 2:11:19 Masters Marathon record time in the 1974 Commonwealth Games. The basis for their skepticism was their lack of knowledge about the accuracy of the course length. Under most similar circumstances, this would be difficult to document 13 years later. However, it happens that the 1974 Commonwealth course is also the present day course of the Moro Christchurch (New Zealand) Marathon. In addition, the Moro race is an AIMS (Association of International Marathons) event.

AIMS has a policy concerning course measurement whereby the course is measured to standard which have been developed based on work done by the Road Runners Club of England and the TAC Standards Committee, and then remeasured by an independent validator prior to the running of the event. For example, I recently measured the Orange Bowl Marathon course (an AIMS event) and obtained a TAC certification on the measurement. The course was then remeasured by Wayne Nicoll, the TAC RRTC (Road Running Technical Committee) Vice Chairman and one of twenty one AIMS approved validators. Mr. Nicoll then rendered his report on the accuracy of the measured course to the race organizers and to AIMS. This double check only regularly occurs on AIMS courses and when a record is set on a TAC certified U.S. course.

Given the foregoing, I contacted Mr. Andy Galloway of Hamilton, New Zealand, who is the AIMS Secretary. I asked Mr. Galloway if the Moro course had been measured, to what standards, and if the present day Moro course is in fact the same used for the 1974 Commonwealth Games. His reply (copy enclosed) confirms that the course was measured to AIMS/IAAF/TAC Standards last year by Mr. Bob Read of Hamilton, New Zealand and found to be at least the stated (marathon) distance, and that the Moro course and 1974 Commonwealth course is the same.

I hope this information will remove any remaining doubts about one of the finest athletic achievements of our time.

Sincerely yours,

Douglas L. Loeffler

DLL:ft

cc: Mr. Andy Galloway - AIMS
Mr. Pete Riegel - TAC RRTC Chairman
Mr. Joe Henderson

Association of International Marathons AND ROAD RACES.
AIMS

6 May 1987.

Mr. Doug Loeffler
2000 N.E 4 Way
Boca Raton
FLORIDA 33431
UNITED STATES OF AMERICA.

Dear Mr. Loeffler,

I never cease to be amazed at how running administrators find enough time to look back into the past instead of looking to the future and for that matter, looking to the present. How often over the years has some record been questioned days, weeks, months and even years after the event? If a record is not broken within a short time, then the opinion seems to be that the course was obviously short.

Let me assure you that there was absolutely no question about the record of Jack Foster in the Commonwealth Games of 1974. Although the methods used for course measuring at that time were not those used today, that particular course has stood the test of even the latest methods.

Yes, it is the same course at that of the Moro Christchurch Marathon and it has been checked using the AIMS/IAAF method, which is in fact the same as that used by the TAC. After all, it was Allan Steinfeld who set up the AIMS method and is Chairman of the AIMS Standards Committee. The course was again measured last year by Mr. Bob Read of Hamilton. Bob is a qualified IAAF/AIMS Course Measurer and one of those who attended the recent Course Measuring Seminar in Seoul. We measure as close to the curb as possible to ride on a bicycle and use a Clain Jones Counter. We calibrate with 4 rides before and a further 4 rides after the course measurement. The calibration courses are set by EDM and guaranteed to 1 milimetre. The shortest course possible is measured and I doubt any runner could run a course as measured because there are always some road surface imperfections which the runner will swing wide to avoid. We add an error factor of 1 in 1,000.

I would ask that you put those writing in National Masters News right on this. Jack Foster was 'one out of the box'. Although he doesn't run much these days and prefers to cycle, I am certain that he could quite easily break 2 hours 30 minutes for the marathon at the age of 55.

I'll certainly look forward to meeting you if you visit New Zealand.

Yours sincerely,

Andy Galloway.

Secretary P O Box 10-106
Hamilton, New Zealand
Telex NZ 21523

A COMPUTER PROGRAM TO DO COURSE MEASUREMENT CALCULATIONS

by Bob Baumel

I have written a program to help me check the calculations in applications for course certification. This usually lets me check the arithmetic with fewer keystrokes than by using a pocket calculator, and also produces a nice report of the results (see enclosed examples).

The program accepts the raw data of a measurement interactively, and produces a report of the results. At the same time, it makes a separate file of the raw data. Using this data file, you can easily re-run the calculation using other options (see below), or if you find that one of your data entries was in error, you can just edit the data file instead of re-entering the whole measurement.

Other features of the program are:

Calculates results for either one or two measurements, by either one measurer or two different measurers.

Has four options for calculating distance: by LARGER or AVERAGE constant, WITH or WITHOUT 1.001 factor. Thus, program is usable for both certification measurements and validations. Using the stored data file, can re-run calculation using any of the 4 options.

Calculates distance for every split-to-split interval for each measurement, and also finds the sum of the "better" (shorter) measurements of all intervals.

Handles 5 or 6 digit Jones counters, and accounts for counter wrap-around at 00000 or 000000.

Can accept calibration data recorded with or without wheel-freezing. If wheel-freezing was used, lets you avoid duplicate entries.

The main limitation of this program, at present, is that the counter readings for the race course measurement must form an unbroken sequence; i.e. you can't reset the counter in the middle of the measurement. Actually, one of the enclosed examples, for the Shea Stadium validation, does have a break in the middle of the course measurement. But I produced this example by pasting together (on the computer - not with actual scissors and paste) the results of several runs of the program (and then I edited the result a little more, so I could include it as part of my Validation Report).

The program is written in Microsoft BASIC version 3.0 for the Apple Macintosh. If you'd like a copy of the program, you have two options:

1) If you have access to a Macintosh with Microsoft BASIC 3.0, just send me a blank micro-floppy disk (86 mm size), and I'll return it with a copy of the program.
2) If not, just drop me a line, and I'll send you a program listing. You can probably adapt it for other computers without too much trouble.

VALIDATION OF SHEA STADIUM 100 MILE 1987

(measurements for closed loop - advertised as 1 mile)
Measured June 12, 1987 9:19 PM - 10:12 PM temperature: 20 deg C

Length of Calibration Course = 290 m
Measurements Computed using AVERAGE Constants WITHOUT 1.001 factor

	Bob Baumel			Dan Brannen		
Pre-Calibration:						
	Start	Finish	Counts	Start*	Finish*	Counts
	683860	686571.5	2711.5	00000	02717	2717
	686571.5	689283	2711.5	03000	05717	2717
	689283	691994.5	2711.5	06000	08717	2717
	691994.5	694705.5	2711	09000	11717	2717
Working Constant:	9349.5690 counts/km			9368.9655 counts/km		
Post-Calibration:						
	720711	723422	2711	00000	02717	2717
	723422	726133	2711	03000	05717	2717
	726133	728844	2711	06000	08717	2717
	728844	731555.5	2711.5	09000	11716	2716
Finish Constant:	9348.7069 counts/km			9368.1034 counts/km		
Constant for Day:	9349.1379 counts/km			9368.5345 counts/km		

Course Measurement:						
	Counter Reading	Interval (counts)	Interval (meters)	Counter Reading	Interval (counts)	Interval (meters)
Start pking lot	700700			86640		
End pking lot	712031.5	11331.5	1212.04	97995	11355.0	1212.04
	------**			-----**		
Start stadium	712030			02040		
End stadium	715950	3920.0	419.29	05972	3932.0	419.70
		-------	-------		-------	-------
Totals:		15251.5	1631.33		15287.0	1631.74

* On the calibration course, Dan Brannen's total counts for each ride were recorded, but not his individual Start and Finish count for each cal ride; thus the Start and Finish counts listed for him on this sheet were made up. I do know that Dan was not using wheel-freezing on the cal course, but instead reset his counter to a round number before each cal ride.

** The course measurement was interrupted briefly in between the rides of the parking lot segment and the stadium segment, while Dan Brannen tried getting medical help for a runner having difficulty on the course.

Phoenix City Marathon

Measured: 86/11/22

Length of Calibration Course = 804.672 m
Measurements Computed using LARGER Constants INCLUDING 1.001 factor

	Tom Knight			Felix Cichocki		
Pre-Calibration:	Start	Finish	Counts	Start	Finish	Counts
	474000	481546.5	7546.5	51000	58544	7544
	481546.5	489094	7547.5	58500	66038	7538
	489094	496643	7549	66000	73539	7539
	496643	504191	7548	73500	81039	7539
Working Constant:	9389.2887 counts/km			9379.6479 counts/km		
Post-Calibration:						
	958000	965549	7549	41000	48543	7543
	965549	973102	7553	48500	56044	7544
	973102	980651.5	7549.5			
Finish Constant:	9392.7097 counts/km			9384.0018 counts/km		
Constant for Day:	9392.7097 counts/km			9384.0018 counts/km		

Course Measurement:

	Counter Reading	Interval (counts)	Interval (meters)	Counter Reading	Interval (counts)	Interval (meters)
Finish	500000			84698		
35 km	567556	67556.0	7192.39	52244	67546.0	7198.00
30 km	614502	46946.0	4998.13	99171	46927.0	5000.74
25 km	661449	46947.0	4998.24	46092	46921.0	5000.11
20 km	708395	46946.0	4998.13	93021	46929.0	5000.96
15 km	755342	46947.0	4998.24	39939	46918.0	4999.79
10 km	802288	46946.0	4998.13	86863	46924.0	5000.43
5 km	849235	46947.0	4998.24	33805	46942.0	5002.34
Start	896181	46946.0	4998.13	80759	46954.0	5003.62
Totals:		396181.0	42179.63		396061.0	42205.98

(Sum of Shortest Splits = 42179.63 meters)

RRTC SEEKS SPEAKERS FOR TAC CONVENTION PROGRAM

(Final Notice)

A special two-hour Technical Program of the RRTC meeting in Honolulu has been planned for the purpose of listening to approximately 10 speakers present a so-called 10-minute paper on a topic of their choice. The deadline for submitting a request to be on this Technical Program is August 1. The paper selection committee will seek advice on any questionable submissions. The preliminary program will be announced by September 1 and an updated program will be announced on October 1 so that the participants will be informed. We anticipate that one or two invited speakers will be included and that one or two "to be announced" topics will appear in the program.

The organizer of this Technical Program is John White, the RRTC Cerfified Course Registrar. You may write to him at the above address or call him at [614] 424-7011(w) or [614] 459-2547(h) to announce or discuss your interest. He would like to know your name, address, relationship to RRTC (if any), and title of your presentation. If the title of your talk is hard to understand, he may ask you a question or two to find out what your topic really concerns. The guideline for topics for this session is simply "material appropriate for the RRTC and/or for Measurement News".

Background: John White suggested to Pete Riegel that some advantages for a more successful RRTC meeting at the 1987 TAC National Convention in Honolulu might occur if part of the meeting were devoted to an organized session of talks by members of the community. Technical societies thrive on a series of so-called 10-minute contributed papers. Usually a series of 10 of these talks are scheduled for a two-hour period. A session chairman introduces the speakers, tightly controls the formal period of speaking, and then moderates two or three question and answer exchanges between the speaker and members of the audience. This approach encourages organized and competent people to speak, promotes the delivery of thought out viewpoints, and dispells any notion that contributions from newcomers or from people on the political fringes cannot receive proper attention and respect. Measurement News represents this type of open forum.

Special note: If any readers have a standard form prepared that informs race directors about TAC Certification and TAC Sanctions and the implications of claim abuse, please send a copy to John White (address given above).

PRUNING THE COURSE LIST — HOW TO DO IT????

The course list grows and grows. While it is satisfying to see this towering monument to our collective industry, it is a certainty that a fair number of the courses we have certified are, with the passage of time, either unused or nonexistent due to roadworks. And few of us have the knowledge or inclination to do the nitpicking job of determining what is current and what is deadwood. Yet it seems a good idea to do it, if it can be done without disproportionate effort.

One thing John White and I have discussed is the idea of putting out a separate book for every year (or Olympiad, or other period), as determined by certification code. We can (and do) have a complete list of everything that was ever certified since late 1982, but this gets fatter all the time. When we are informed that some course replaces some other course, we do delete the old course without touching the historical master list. But few people inform us of dead courses - I myself have only small knowledge of dead courses within my region.

A separate book for each year would not be very handy for someone searching for a course, but putting all the courses in one book is too unwieldy.

Do we need a national book at all? Should we merely publish periodic state lists and send them off to regional certifiers (or folks who ask) every so often?

We are open to suggestion on this.

SHORT CALIBRATION COURSES

Scott Hubbard wrote to Wayne Nicoll:

"Why a 300 m cal course - why not 220 yards? I have a 220 y course about 150 yards from my house. Don't have room to expand to 300 m. No big deal - but curious to learn rationale behind 300 m length. Seems odd to me - .186 of a mile."

Wayne replied:
"The idea to reduce the length of cal courses came from Pete. He selected 1000' or 300 meters. I think that is very generous and need not be reduced further.

We are still working on the ground rules. Go ahead and start using 1000 footers. Measure one time, no temperature adjustment. You must be able to ride the bike to the race course. You cannot load the bike on a vehicle to get to the course to be measured. Calibrate and recalibrate at least four times.

We recommend freezing the wheel at the endpoints, turning around and coming back with same figure. We may come up with a rule-of-thumb adjustment for temperatures below 68 F."

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

June 12, 1987

Scott Hubbard - 921 Bath - Ann Arbor, MI 48103

Dear Scott,

Wayne sent me your note inquiring about why I chose 1000 feet/300m for a short cal course length. It was purely arbitrary. The idea was to get a cal course length that was long enough to do the job but short enough to encourage people to lay them out right at the race site. Also, the lengths each come out to ten tape lengths, which is nice and metric and is a number which is easy to remember.

There never was an intention that the short cal courses should be used for remote measurements. We will still be laying out standard cal courses for that, and including our temperature and tension methods in them. I was talking with Bob Baumel yesterday and we agreed that it would be a good idea to retain the accurate taping procedures for the full-length cal courses. In this way we will keep our regional certifiers knowledgeable in how to tape when they really have to be accurate (like checking a track).

The short cal course tradeoff came about because I found myself calibrating on my home course, then driving 50 to 200 miles to a race course and doing the layout. After recalibrating at home I would figure my adjustments and phone the race director what to do with the s/f/turnaround. I found this unsatisfactory and I wanted a way to be able to leave the race course with everything correct on the ground. But at the same time I did not want to have to lay out a 1/2 mile every time I traveled. Takes too long.

After looking at the results of the experiment that 8 riders performed on cal courses of varying length (see MN #15 - Feb '86) I concluded that the effect of shortening the cal course was minimal, and decided to allow regional certifiers to use short cal courses, right on the race site. No transporting the bike. And that's where it stands.

I recognize that it is "safer" to use a remote cal course, since the calibration spread will probably be larger. But the desirability of getting the whole job done right on site is high, and I think the tradeoff is, on the whole, positive. There is no intention that these shorties be certified for reuse. They are for at-the-site measurements only.

Best regards,

Pete

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

2135 Newport Pl., NW
Washington, DC 20037
May 31, 1987

Dear Pete,

Thanks for taking time to comment on the measurement seminars. I also had some second thoughts about our approach. Indoors and small was great for demonstrating the concept, but I'd want to get people on bikes and measure outdoors— laying out cal course and all. Still small and close by, though, no traveling to a ½-mi cal course as originally planned. In hindsight, I think the METRO pkg. lot would have worked well (though admittedly not on Friday a.m., or in the rain).

Metric tapes— I think I agree, for beginners, it's best to simplify by just using a 100-foot tape. The flip side is that the math of using the cal course for a metric distance is slightly messier, but since mile splits seem to be here to stay, I guess this race goes to feet over meters. (By half a length or so.)

Calibration course layout— Right, that's why I was reluctant to use my method after we'd explained the other one. I'll concede that the numbered tape method is a bit simpler than the fixed point method, particularly for someone whose tape is marked in inches instead of decimal parts of a foot. I still have a strong preference for setting fixed points, and I'm working on writing a clear and concise explanation.

How accurate must a cal course be? One count per mile would give us an allowable error of about 4"/mi, 2" over ½-mi, only 3/4-in over 1000 feet. Maybe that's too strict? Double it? Personally, I don't like to see SCFF get eaten up by this type of thing, since so much of it is already eaten up by riding, etc.

If we want to simplify, how about:
- over 68°F, no correction for temp. is required
- under 68°,
  For each 10 degrees below 68, <u>add</u> 3/4 inch per 1000 feet of cal course.
- We could do this in blocks, and use 70° instead of 68:
  - for temps in the 60's, add 3/4 in. per 1000 feet
  - for temps in the 50's, add 1½ in. per 1000 feet
  - ETC.

Before I stop, a couple comments about short & close cal courses: I'm strongly in favor, but I think with short courses we should insist on two things: 1. At each end, clamp brakes to freeze counter, then restart in other direction. That way we're sure to get the benefit of the total distance ridden in calibrating.

2. Ride the cal course more times as appropriate. We need some judgment calls here, but I wouldn't put as much trust in 4 x 1000 feet as I would in 4 x 2640 feet. On the other hand, I don't think 5 round trips (10 rides) on the 1000-foot course are necessary. On short courses I've used, I've usually tried to ride a total distance of 3 km, or 2 miles, or thereabouts. I'm not sure how much of that is needed.

'Bye for now,

Bob J

Copies: Riegel, Nicoll, Baumel

PS - On metric system: It may confuse beginners but in the long run will be simpler and more clear. I don't know about "promotion", but let's make SI info available.

INTERNATIONAL VALIDATION CONSIDERATIONS

Can we ever realistically expect an international system of validations to come to pass? I would like to think it could happen, but I must admit that I feel a bit pessimistic when I consider the issues of national pride and differences of culture that have to be overcome.

Here in the US we are less formal and structured than the rest of the world. Our runners have choices of where and when they run that many foreign runners do not have. And some of the people I've talked with feel that our way is not necessarily better, and they make good points. Not always, but often enough to make me believe we're not 100 percent right in the way we look at things.

Consider an astounding performance in a faraway country with a culture very different from our own. When the validator shows up on the scene he should be aware that to do his job properly he may have to act in a way that the host people may consider offensive. It is always a bit awkward when you have to ask someone to prove what they have just told you. Especially when you may be talking through an interpreter, or looking at documents that you may understand only sketchily, since they are written in an unknown tongue.

If a certain amount of preparation can be made, at the IAAF level, the presence of a validator may not need to be seen as an intrusion or a denial of the honesty of the race organizer. But this won't be easy. Questions of pride or "face" may be involved, and the validator may think that only truth is important. But the race director has all of his personal pride and reputation tied up in things coming out right, and if he should act defensively it's understandable.

In a validation situation a race director has a lot to lose. The race is over, the new "records" have been proclaimed by the media, and the sponsors have got good value for the megabucks they poured into buying fast horses and good organization. Is it any wonder race directors resist the idea of post-race validation? Having the records shot down is great publicity for truth and justice, but it doesn't do a lot for the poor race director who has to explain what happened to his sponsors and the runners. When someone has given you half a million dollars to do things right he is going to have some hard questions for you if things go wrong.

There's an aspect to validation that has not been given great attention, but it should be looked at. That's the timing. A record performance depends on good measurement of both distance and time, yet when a record run is made we first think "oh-oh, short course?" Is the initial thought ever "oh-oh, bad timing?" Not to my knowledge. Timing is generally assumed to be correct. Probably, at least for frontrunners, it is correct. Timing the first few is pretty difficult to get wrong. It's back in the pack, where the age-records lurk, that timing begins to get strange. The course is easy to check, because it's generally still there. But the timing simply happened, and it either happened right or it didn't. I wonder how I would go about asking the right questions of a chief timer in some country where the culture and customs differ greatly from here? How would I know when I had heard what I needed to hear? I think the problem of international validations is not as simple as declaring that a new rule is to be enforced.

Is there any way at all to create a credible international road records structure without a validation program? The present AIMS method comes very close. It does minimize the possibility of a bad course. But the AIMS procedure ignores timing. It's certainly possible for the AIMS validator to start a watch when the gun goes off and check that the official time is pretty close to his own. Perhaps this should be a part of the AIMS validator's duty.

As long as records continue to be broken by only a little bit each time we will probably continue to take things at face value. What other option do we have? But one day soon, in some faraway place very unlike our own society, there may happen the first sub-2 marathon, and all the paperwork may be in order. It certainly would be nice to have a checking procedure ready for when it does happen, because a performance like that would be very hard to swallow no matter what paperwork was there.

Are we too suspicious here in the US, or should we consider others to be overly gullible?

The way we do it in the US is very stressful to the race organization, and it would be nice if we could find a way to do it that would have the course proclaimed right before the race. With an expert measurer and a 0.1 percent SCPF we are generally OK, but the race director still has to worry about it.

AIMS is an organization composed of race directors, and they have chosen a path that, not surprisingly, allows them to sleep nights when they get a record on the course - unless the course is in the US. The ideals of truth are good, but these people have the job of obtaining sponsorship and dealing with all the complexity of the race. It is no wonder they want courses made reliable before the fact. They want the event to be over when it's over. Compared to the job of race director, the job of measurer is trivial. Sure, it can be pesky, but dealing with numbers and paintmarks is sure easier than coping with all those people-induced problems.

Now that we have considered the stress on the poor race directors, let's look at the people who are charged with the task of choosing between good records and bogus records. Not an easy task, and it should not be surprising if the demands of the records keepers conflict with the desires of the race directors.

A records-keeper deals in perceived truth, and it's sometimes a tough job to find out what that truth is. Very often feelings and emotions are involved, and this can be stressful to the records keeper, because nobody wishes to be responsible for the unhappiness of others. But that goes with the territory. There's a fine line between being reasonable and being wishy-washy and the records-keeper must tread it.

Does anyone have any ideas on this subject?

Pete

TRACK & FIELD NEWS

22 May 1987

P.O. Box 296, Los Altos, CA 94023-0296, USA. Telex: 5101006580
Telephone: 415/948-8188 (Business), 415/948-8417 (Editorial)

Mr. Peter Riegel
3354 Kirkham Road
Columbus, OH 43221

Dear Pete,

Regards #23, page 4: I don't think that a meter is defined as the distance covered by light in a second. It's nothing so simple, at least not according to my trusty "Handbook of Chemistry and Physics."

Try this on for size:

"The meter (unit of length) is the length of exactly 1,650,763.73 wavelengths of the radtion in vacuum corresponding to the unperturbed transition between the levels $2p_{10}$ and $5d_5$ of the atom of Krypton 86, the orange-red line."

Looks as if you may have to have spectrometers mounted on your bicycles!

Yours in field & stream,

E. Garry Hill/managing editor

THE ATHLETICS CONGRESS
OF THE USA

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May 27, 1987

E. Garry Hill - Track & Field News - PO Box 281 - Los Altos, CA 94023

Dear Garry,

Isn't it strange and wonderful how much time we can spend on something of such great general interest as the definition of the meter! You can join the line of the duped along with others, as you can see from the enclosed letter (3/27) of Bob Baumel to Ultrarunning.

Your problem seems to be a Handbook of Chemistry and Physics that was published before 1983. You have been snookered by devious physicists.

On to more interesting topics: You've been in the Track & Field trade for some years - at least as long as I've been a subscriber (15 years or so). In that time have you ever heard of anybody checking out a track to see whether it is the proper length? How did they do it? What standards did they use?

We in RRTC seem to be drifting in a direction that may find us doing some track-measuring, and frankly I don't know whether to welcome it or not. I can see a great potential for us to be seen as upstarts who are trying to rock the boat. But with all the screwups that happen in road course measurement I would be surprised if there were not at least a few crank tracks around - but I never hear about it.

I did hear that somebody once measured the Iffley Road track at Oxford just after Bannister's run, and found it "1/2 inch oversize". I have often wondered what that measurer would have done if his measurement had shown it 1/2 inch undersize. Would he have shouted "short course"? And become the guy who shot down the first sub-4 minute mile? It's impossible to be exact in measurement and this does create some problems with people who believe that a measurement result is a revelation of absolute truth.

RRTC's own ace measurer, Tom Knight, recounts a story of when he was at a college track meet and ran raving out onto the track because he noticed that they were starting the women's 5000 in the wrong place. They shooed him off and started the race, but Tom ran to the press box and told. The officials were sure he was wrong because, after all they'd been using that line for the last 5 years! I may have it garbled but that's the gist as I got it from Tom. After the race they checked, and some woman lost a record because of it. Was Tom the good guy or the bad? Depends on who you ask I guess.

Best, Pete

xc: Bob Baumel - 129 Warwick Road - Ponca City, OK 74601
Tom Knight - 307 Dartmouth Ave - San Carlos, CA 94070

TRS
TOTAL RACE SYSTEMS
3050 Rambling Drive
Dallas, Texas 75228
(214) 320-8359

June 8, 1987

Measurement News(MN)
c/o TAC/RRTC
3354 Kirkham Road
Columbus, Ohio 43221

Attn: Peter S. Riegel, Editor

Dear Pete,

I have been getting more and more feedback on MN. People feel MN only lacks some outside input from other people in our committee. I agree, we could turn a good MN into a better MN with this input. "The more the merrier".

Could you consider the following:
-front cover photo - a committee member, to get faces known with the names
-Editor's message - a page on some important point or issue to get across
-Eastern U.S. News - a page for Wayne Nicoll
-Western U.S. News - a page for Bob Baumel
-Finish Line News - a page for Alan Jones
-Validations News - a page for Sally Nicoll
-Secretary, RRCA Rep., TACSTATS Rep., Registrar of Courses - a page that has one of four above or short notes from all or three or two...
-Correspondence Corner - 10 pages of letters to and from our regulars
-What is up - 6-8 pages set aside for short notes on various topics, i.e. Drug Testing, Metric Splits, Certified Aircraft Carrier?, etc.

I do think these changes would lighten your load too. With input from others we could reach more people because of each persons attachment to MN. A wider distribution will follow due to each person wanting to show off their stuff. Right now it is you and I and maybe the "person on the cover photo".

Think about it Pete. I am sure we could put effort towards the July and September issues as a trial. Lets see if it can work. Let's see if this new blood helps MN reach more people. That is what we are trying to do - spread the word.

Give me a hollar on this. The more I think about it the better it sounds. Let's give it a try. Less work for you and a "wider opinioned" MN.

Regards,

Kevin P. Lucas
Publisher, Measurement News

THE ATHLETICS CONGRESS
OF THE USA

Road Running Technical Committee
Peter S. Riegel, Chairman

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June 11, 1987

Kevin Lucas - 3050 Rambling Dr - Dallas, TX 75228

Dear Kevin,

Our stuff crossed in the mail. You will find an edited version of your letter enclosed. I intend to put it in next MN, along with an invitation for contributions. Maybe this letter will turn out to be that invitation.

Our masthead page spells out pretty clearly that we are after material from anyone who wants to send it. I still feel that way. If MN lacks outside input it is because few "outside" people know we are here. I hope we'll get some lively facts and opinion.

Whenever one of the main players has anything to say, I put it in MN, and I have been doing this ever since it got started. I've also tried to stick in as much from "outsiders" as I could just to let readers know that we welcome their thoughts.

I'm a bit afraid of the formal approach, in which we give various people space each month and ask them to fill it. That forces them to try to say something when they may not have anything to say. And when they do have something to say, I hate to limit them to any fixed space.

So far I have not had to edit contributions severely. If we should receive an avalanche of material I will have to be more selective. I've felt fortunate in that the stuff we do get is pretty good. I try to get as much non-Pete in MN as I can, but don't always succeed.

The approach I've been using is to organize each issue on the basis of what I've received. A standard format may not be as flexible as this. I cut, paste and shuffle until the layout pleases me and I have the required number of pages. Then I send it off to you.

If we get a lot of good stuff we get a fat issue of MN. If pickings are slim MN is skinny. I hate the idea of padding with substandard material, but seems like we can always count on at least 28 pages. And I've the impression things are growing.

I guess this letter goes with yours - everybody is urged to send in material to MN. We want to know what you think!

And cover photos are highly desired! Send them in! Be famous!

Best regards,

Pete

THE DEVIL FINDS WORK FOR IDLE HANDS

When you get into listkeeping and have a computer to play with you find yourself whiling away the hours playing with the numbers in an effort to derive something earth-shaking (or at least amusing) from them. Your RRTC Research Subcommittee has completed one such scholarly work, and here are the results:

We have 4001 courses "on the books" at present (May 15, 1987). About 57 percent of them are either 5k, 10k or marathon. They are all identified by ID numbers that come pretty close to telling when they were certified. The numbers and dates break down as follows:

Number of New Courses Created in Year

Year	5km	10km	Marathon	Total
1983	59	200	49	308
1984	91	305	62	458
1985	187	398	82	667
1986	273	361	61	695

Students of the growth of the sport are invited to draw sociologically relevant conclusions from the above. It can be seen that 5k's are growing while 10k's and marathons are on the decline.

We might point out that once a course is measured it can go on for a long time being raced on, so a leveling off in the number of new courses created each year does not mean that racing is leveling off. A decline in growth is still growth!

Since all of these courses are on a floppy disc, anybody who has a statistical yen to play with the raw data is invited to do so. Send me a disc and I'll send you a copy of all the courses on file. Then you can work numerical wonders and maybe send in something nifty for a forthcoming MN.

Who has measured the most?
Who has certified the most?
Which state has the greatest percentage of new courses?
Who is the most burnt-out certifier?

No question is too ridiculous to ask or answer. Does the phase of the moon affect our listings? Get the list, apply your PC and brain to the problem, and report back! Knowledge is power.

1987 TAC CONVENTION SCHEDULE

I just received a copy of the schedule from Marty Weiss. If you want a copy send me a SASE. Of particular interest to us RRTC types is when we meet. Here it is:

Thursday, December 10 - 7:30 PM to 11 PM - RRTC Executive Committee. Note - This is not an exclusive meeting, and all certifiers and members of the TAC membership are encouraged sit in.

Friday, December 11 - 7 PM to 11 PM RRTC general meeting. Again, the meeting is open to all.

If you have plans to bring up a new proposal at the Convention, please pave the way by sending in something to MN beforehand. This will give everybody a chance to talk it over beforehand in a leisurely and thoughtful way. Things happen so fast at the Convention that you should not be surprised if a last-minute proposition gets put off - beyond the Convention - for more lengthy consideration. Forewarned is forearmed.

In past conventions it always seemed that something came out of left field that was considered to be a BURNING ISSUE requiring RRTC's immediate action. Well, this is a poor way to do business, because often some hasty things get done that later seem to be ill-advised. So, if we make some mistakes at the Convention, at least they will be mistakes that we have thought about beforehand.

Please send in anything you want dealt with at the convention to me, and I'll see that it's put on an agenda.

SPECIAL AIRLINE RATES TO HAWAII

United Airlines has been named the official carrier for our Convention in Honolulu -- and they are offering a 5% discount off United's fares from first-class through the already 70% discounted Ultra Saver -- or an unrestricted 40% discount off standard coach fares.

To obtain the United discount, either you or your travel agent should phone United's toll free number at 800-521-4041 (48 contiguous states), or 800-722-5243, extension 6608, in Alaska and Hawaii. These numbers are serviced daily between 8:30 a.m. and 8:00 p.m. EST; when the reservationist answers, the special TAC account number of 7180H should immediately be referenced.

For complete convention information write to TAC/USA, PO Box 120, Indianapolis, IN 46206 or call 317-638-9155.