

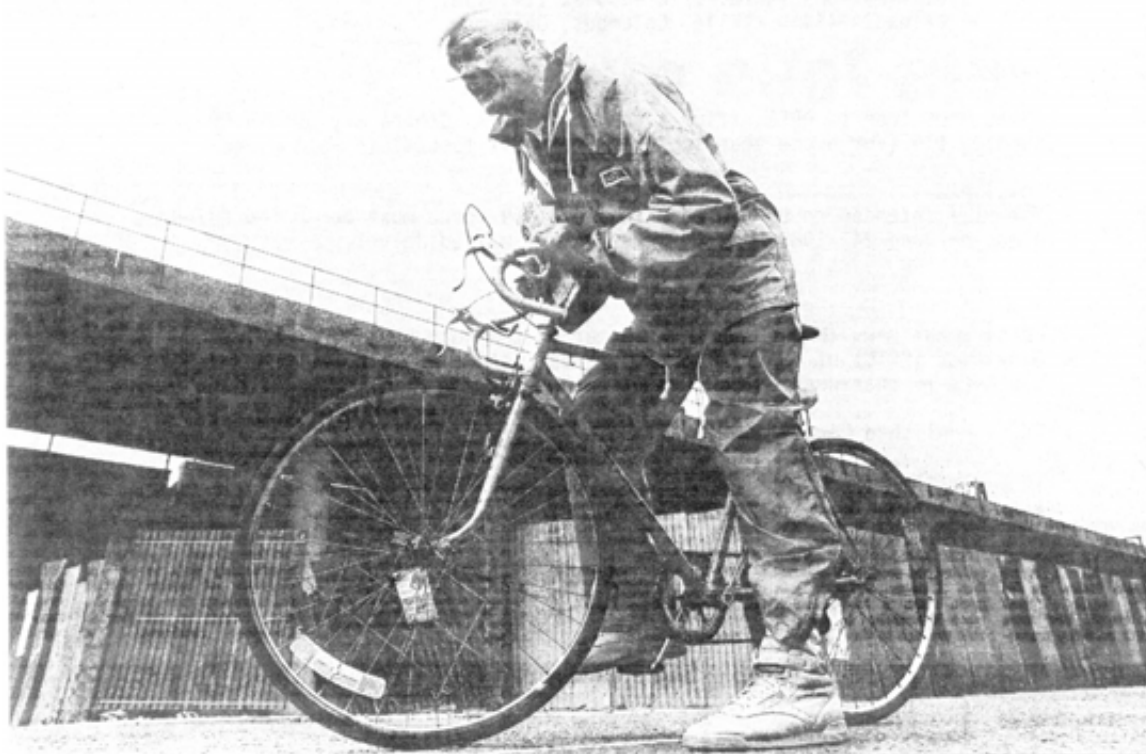
MEASUREMENT NEWS



May

1989

Issue #35



All a matter of course for John Disley, who measures the marathon route from the saddle of a bicycle

Disley blazing a trail



by Cliff Temple

IT GIVES you a great sense of power, admits John Disley, when you're driving down the wrong side of the road in the early hours, lights flashing, painting the public roads blue.

Disley is not a crazed vandal. But his role as course director for this morning's London Marathon includes the painting of that teasing trail of blue dashes which will lead the 25,000 runners on their journey around the capital city.

It is nine years since Disley, along with Chris Brasher, had to convince the authorities that their proposed race would cause very little nuisance if it went round the near-derelict Isle of Dogs and Surrey Docks.

Today, that section of the course, between 15 and 19 miles, takes it through what Disley describes as "the biggest building site in Europe".

Not that everyone is happy about the disruption to traffic, or travel, which the London Marathon causes every year.

"We do make life a little difficult for a lot of people for one day of the year," Disley admitted. "But I like to think that we justify it because nearly £30m has been raised for charity since 1981, and we put a lot of money back into the London boroughs for recreational use."

Disley, an energetic 60-year-old, was an Olympic steeplechase bronze medalist in 1952, and remains one of the unsung, insomniac heroes of the marathon's success story, supervising its precise measurement.

By tomorrow, there will be little sign of the massive marathon having ever taken place. The sweat drops will have dried, the portable loos will be towed away and the 45 on-course clocks will have been rapidly collected.

Even the painted blue lines will have disappeared. "We asked ICI if they could develop a paint which could be sprayed on, dry within seconds, yet be easily removed. It took 18 months, but they managed it," said Disley.

At 5am on Friday, Disley, with a team which included the 1982 race-winner Hugh Jones, injured and out of this year's event, had finished driving around the course for eight hours on something resembling a huge lawn-mower, which marks blue-paint stripes on the road every four metres. Last night he was out again putting down strips of marking tape at kilometre points to please Japanese television.

This morning, before the race leaders have even crossed Tower Bridge, near the halfway point, a team of 10 men will already be scrubbing away at the blue lines in Greenwich.

MEASUREMENT NEWS

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HOW WE DID IN 1988

The 1988 courses are all in, except for last-minute strays. Accordingly, here is a breakdown of how things went last year:

Most active certifier: Wayne Nicoll - 101 courses certified (111 last year)

Most active measurer: A. C. Linnerud with 42 courses measured (48 last year)

Measurers active in 1988: 292 (278 last year)

State with greatest number of active measurers: California, with 26

Courses certified in 1988: 1039 (1129 last year)

28 people measured 10 or more courses in 1988, accounting for half (561) of the courses certified this year.

Once again the, total number of courses is less than the previous year. Does this indicate a decline in running? Perhaps, but it may also show growth, since total courses continue to rise, and many previously-certified courses continue to be used.

After pursuing the 10 km distance for years, the 5 km distance finally has surpassed it in total courses for the year.

NEW APPOINTMENTS

Don Potter has been made Final Signatory for the state of Arkansas. In appointing him Bob Baume noted his "consistently high-quality work." Congratulations, Don.

Michael Franke has been appointed certifier for Iowa, and Karl Ungurean has been appointed for Nebraska. Welcome to RRTC, Mike and Karl!

Mike and Karl now cover the territory formerly served by Jim Lewis.

I'll miss Jim, but the press of his real life has made it impossible for him to continue as a certifier. Rather than do it badly, he's decided to pass on the responsibilities. Our world of measurement has benefited from Jim's presence and writings. He will remain a Final Signatory. So long, Jim - it's been good to know you. Stay in touch.

COURSES CERTIFIED
IN STATE IN 1988

CA	128
TX	91
FL	66
OH	64
OK	54
PA	52
NC	45
IL	42
SC	37
NY	32
MI	31
GA	30
NJ	30
VA	24
KS	21
WA	21
CO	20
CT	19
TN	19
WI	17
KY	16
MA	14
DE	13
MD	13
MN	12
DC	11
OR	11
UT	11
MO	10
ME	9
IN	8
NH	8
AR	8
AZ	7
HI	6
AL	5
IA	5
AK	4
NV	4
MT	4
NE	3
WV	3
NM	3
MS	2
WY	2
RI	2
VT	1
LA	1
ND	0
ID	0
SD	0

1039

ACTIVE MEASURERS
IN STATE IN 1988

CA	26
TX	21
FL	18
PA	16
OH	16
NY	14
GA	14
MA	10
TN	10
SC	9
VA	8
CT	8
OK	8
ME	7
KS	7
CO	6
MO	6
AR	6
WA	6
IL	5
MI	4
HI	4
WI	4
NH	4
NE	3
NJ	3
UT	3
OR	3
NC	3
NV	3
MD	3
AL	3
IA	3
MN	3
IN	3
KY	3
MS	2
MT	2
WV	2
DE	2
AZ	2
RI	2
AK	2
LA	1
VT	1
WY	1
NM	1
DC	1
ID	0
SD	0
ND	0

292

COURSES CERTIFIED
BY CERTIFIERS IN 88

WN	101
PR	84
RS	74
ETM	62
BB	60
RT	50
RE	49
CW	48
ACL	44
BH	39
DB	38
JW	38
BS	34
KL	32
SH	31
BG	31
TK	29
MR	21
WG	20
DL	18
DR	17
RR	12
BT	11
FH	11
GN	10
DP	10
MW	10
FC	7
BN	7
JL	7
SV	6
TF	6
JD	6
DL	4
FW	4
LB	3
KY	3
BC	1
AS	1

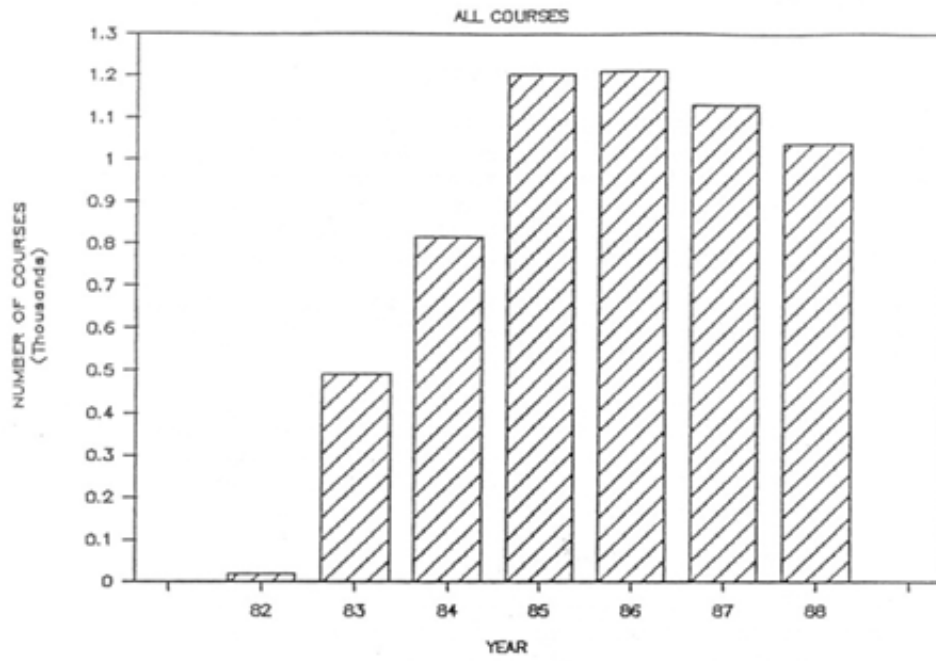
1039

MEASURERS WITH
10 OR MORE

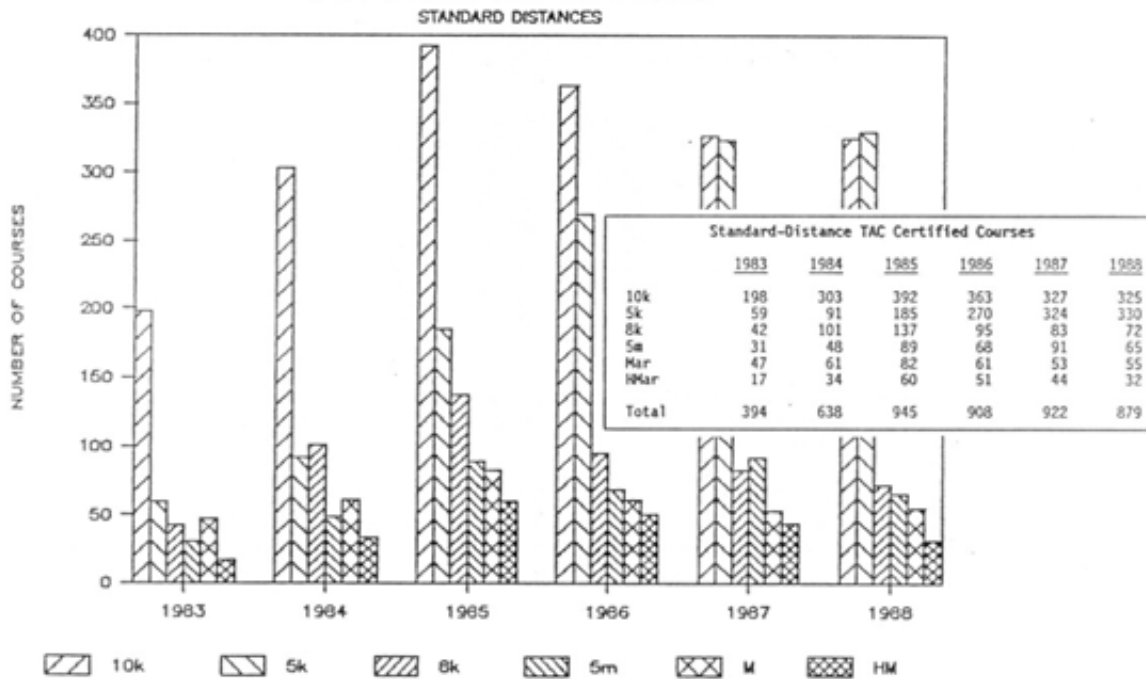
A Linnerud	42
E McBrayer	40
W Nicoll	34
R Thurston	34
D Brannen	33
G Lafarlette	27
J Wight	27
R Hickey	25
D White	24
K Lucas	22
R Scardera	20
C Wisser	20
S Courtney	19
F LeBlanc	16
J Smith	15
S Hubbard	15
P Riegel	15
R Dewey	14
B Grass	14
S Berglund	14
C Ensz	13
J Spalding	13
B Marable	12
E McDowell	12
T Kelly	11
R Recker	10
J Knoedel	10
L Barrett	10

561

TAC CERTIFIED COURSES BY YEAR



TAC CERTIFIED COURSES



DROP AND SEPARATION

At the 1988 TAC Convention Dan Brannen proposed a rule change that would limit drop on point-to-point courses to 3.5 meters per kilometer. The purpose of the proposal was to attempt to separate ordinary point-to-point courses from those with extreme drop. Using specific examples, the rule would retain Boston (drop = 3.3 m/km) as a point-to-point record-quality course, while leaving St George Marathon (drop = 19 m/km) in a non-record category.

The proposal was put before RRTC in the hope that RRTC could find a method to determine that a specific amount of drop was worth a specific amount of time or distance, to justify a definite cutoff point.

RRTC, in the form of Ken Young and Bob Baumel, has approximated the aid given by drop. It seems that a meter of drop is about equal to 2 to 4 meters of length, or 1/2 to 1 second, but no definite number has yet been tied down. If one should be found, there remains for the LDR and Records Committees to decide how they wish to have records kept.

The question of "how much aid is too much?" is more one of philosophy than of technology. It is easy to draw a line at zero aid - simply require that a record-quality course start and finish at exactly the same place. This has the obvious drawback that it limits course layout to an unacceptable degree. We will certainly accept some drop and some separation for the various categories of course.

The politics of the proposal involve all those races that are likely to be affected by it. This part of the situation is most certainly a non-technical one. However, since knowledge of the situation may help in deciding things, I've prepared a couple of charts.

PERCENTAGES OF ALL COURSES WITH DROP AND SEPARATION
LESS THAN OR EQUAL TO INDICATED VALUES

DROP	SEPARATION			
	0	10	20	30
0	16.2	72.8	74.6	75.2
0.5	16.5	81.7	83.9	84.5
1	16.5	85.2	87.7	88.5
1.5	16.5	86.9	89.5	90.3
2	16.5	87.4	90.2	91.0
2.5	16.5	87.6	90.3	91.2
3	16.5	88.0	90.8	91.7

Example: 87.4 percent of all courses have a drop of 2 m/km or less and a separation of 10 percent or less.

The above table is based on a recent analysis I did on the complete course list, including 5266 courses. I discarded all courses that did not have a listed drop/sep, and all odd-distance courses. I also discarded all cal courses and tracks. When I was all done I wound up with 2210 courses for analysis.

Our present limits include 87 percent of the courses. Most contemplated changes will not have a great numerical effect, since we'll be up around 90 percent no matter what we do that's not ridiculous.

The effect of wind will vary from race to race, and so far nobody has come up with a reasonable way to deal with it, except to limit allowable separation so that the wind effect is largely negated no matter how it blows.

The political dimension may be seen on the following page, if you have strong eyes. It shows how the top 100 courses, as listed in TACTIMES (May/December 1988), fall in a drop/separation matrix. I selected the latest certified course for each event. I made a few guesses, but not many. Note: These charts appeared in the last issue of TACTIMES.

Every combination of drop and separation will affect some courses on the border. That may not affect a purely scientific choice, but it likely will affect any choice we make in our real world.

HELGE IBERT INJURED IN MEASURING ACCIDENT

Ted Paulin called and said that Helge Ibert had fallen on April 2 in Vienna. He was in the closing kilometers of a measurement and his bike wheel caught in a pavement irregularity. I called Anna Ibert, and she said Helge was taken to a Berlin hospital, having been moved there from the Vienna hospital where he was initially taken. At first they were concerned about a head injury, but later learned he had broken a hip.

I don't know how bad the break is. With good luck it will be easily repaired and he will be up and about reasonably soon. With bad luck, who knows? Anna was concerned for those others of us who do this sort of traveling and measuring. We do put ourselves into some risky situations at times.

It would seem a high price to pay if Helge should wind up disabled as a result of a voluntarily-donated measuring effort.

Things like this make me recall some of those night rides over invisible pavement, trusting that there won't be something awful under the wheel in the next few meters. So far so good for us, but the odds caught up with Helge. Actually I'm not aware of whether it was a night ride at all. All I heard was that his wheel caught something bad in the road, and he got dumped.

Later note: According to Peter Christ, AIMS Treasurer, Helge's break did not actually displace any bone pieces from their proper places, and the break should heal well without Helge having to wear a cast.

Separation, Percent of Course Length

Drop, Meters per Kilometer	0	10	20	30
	05A CA Run to the FarSide III 0 4.6 05K NJ K J Waterfront 5 Mile 0 5.7 05K TX Academy Jingle Bell Run -.04 1.6 05L IL Sharrack Shuffle 0 .5 05A OR Shaerens Run 0 1 10A AL Azalea Trail Run 0.0 6 10K AZ New Times Phoenix 10 km -.15 1.8 10K CA Festival of Lights 0.0 1 10K CA Run to the FarSide III 0 3 10K CA SanJose MercuryNews 10 km 0 .5 10K CA Super Bowl Sunday 1998 -.31 1.9 10K CA Heart Tree Atlanta 0 1.2 10K KY Rodes City Run -.15 8.1 10K KY Wendy's -.08 7 10K MA Wile Sun 0.0 0 10K MO Fritzsche's 10 km Run Fest 0 .7 10K MI ThanksgivingParadeTurkTrot 0 4 10K MN Get In Gear 0.0 3 10K NC Charlotte Observer 0.0 4 10K NJ Asbury Park 10K Dual Start 0 3.8 10K NY L'Eggs Mini-Marathon -.02 5 10K NY Ferris 0.0 5 10K OH Revco-Cleveland 0.0 2 10K TX 1987 Symphony 0 1 10K TX Azalea Run -.8 4.0 10K TX Bayou City Fun Run 0.0 9 10K TX Chilli's Run -.37 9 10K TX Cowtown 0 5 10K DC Cherry Blossom 0.0 0 10K DC Pentagon 0.0 2 10K IL Oktoberfest 0 2 10A FL Gasparilla DistanceClassic 0 13 10A FL River Run (north start) 0.0 7 10A OR Heart Hill-Marathon 0.0 0 10K OK Tulsa Run 10km -.07 2.7 10K CA Santa Monica 0.0 0 10K MA New Bedford 0.0 0 10K PA Philadelphia Distance Run 0.0 3 10K DC Marine Corps Marathon -.4 .9 10K FL Cedar OrangeBowl Marathon 0 .92 10K MO St Louis Marathon 0 1 10K NJ New Jersey Waterfront Mar 0 0.5 10K OH Columbus Marathon 0 0.6 10K OH Revco Cleveland 0.0 1 10K TX Dallas White Rock -.01 1 10K TX Houston-Tenneco Marathon 0 1	05K FL Gasparilla DistanceClassic 0 13 10K CO Boulder Boulder -2.5 30 10K NY Bollemaker 0.0 28 10K IL Columbus Select Half Mar 0 25	10K LA Crescent City Classic 0.0 70 10K MI Deater-Ann Arbor -.0.8 72 10K SC Cooper River Bridge 0 51 10K CA Bay to Breakers -.0.1 94 10K CA Le Jolla 0.0 85 10K WA Twin Cities Marathon -.0.9 31	
	05K CO Cherry Creek Sneak 0.1 1.6 10A AL Sonat Vulcan Run 0.2 8 10K CA TomSullivan StPatrick'sDay .3 2.3 10K IA Heartland Hustle 10 km .12 3.8 10K MA Tulls 10 km for women .15 1 10K NE Corporate Cup Run .06 4 10K TX First Republic Symphony .2 7.4 10M CO Garden Of The Gods 0.1 9.3 10M MO Annapolis 10 Mile .2 .6 10M MI Bobby Crim 0.1 9 10K WA Blomday (Riverside Av) 0.3 4 10K CA 1988 City of LA Marathon .38 1.3 10K CA Long Beach 0.1 1 10K OR Portland Marathon 0.1 1 10K WA Emerald City Marathon .25 .6	10K CA 1987 SF-Hill Marathon .5 16	10K KY KY Derby Festival Mini-Mar 0.3 57 10K NY New York City 0.1 58	
	10K TX HoustonChronicle Dome Run .87 5.5 10K OR Cascade Run Off .73 4 10K WA Hindstrow Beat the Bridge 1.3 5.0	10K PA Pittsburgh Marathon .57 22	10K MI Grandea's .73 83	
	10K CA Old Hometown Run 2.4 8	10K CA 187 Mile-SF Half Marathon 1.7 11 10K MI Detroit FreePress Int Mar 2 12	05K CO Denver Symphony Run 1.8 26 05K WA St Patrick's (City Centre) 1.8 68 05K WA Al's Run 2.5 35 10M PA Broad Street Run 2.5 93 10K CA America's Finest City Mar 2.3 44 10K CA 1987 California Int Mar 2.5 100 10K CA Big Sur International 2.2 95 10K CA Kapa Valley 2.2 89	
		10K TX Capital 10 km 3.4 21	10K CA Atlanta Half Marathon 2.8 67 10K MA Boston AA 3.3 76	
			10K CA Peachtree 13 73 10K PA Pittsburgh Great Race 10 97 10K CO Bud Light 14 90 10K UT St George 19 100	

THE ATHLETICS CONGRESS
OF THE USA

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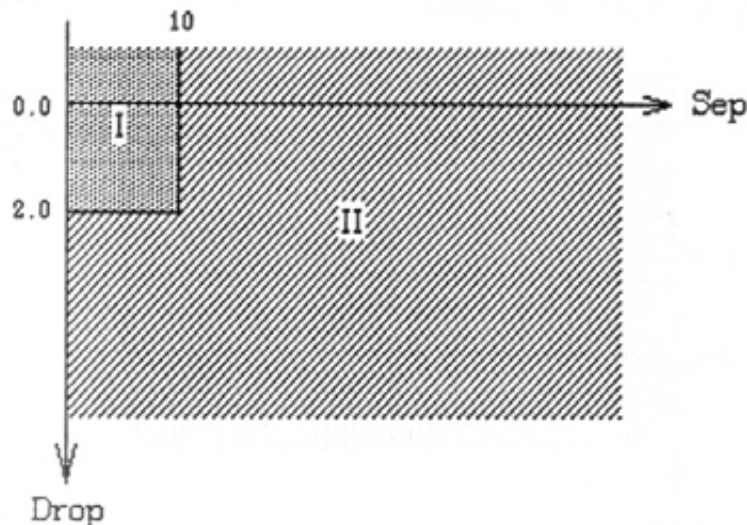
1989-03-19

Pete Riegel
3354 Kirkham Road
Columbus, OH 43221

Dear Pete,

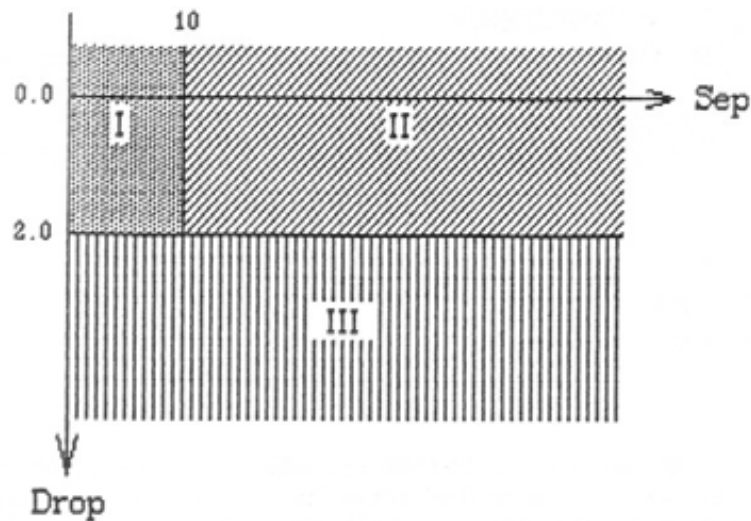
The course counts you have prepared recently, showing numbers of courses with various amounts of drop and separation, indicate that you either do not fully understand Dan Brannen's proposal from the 1988 Convention, or else you consider it so frivolous that you don't think it worthwhile to find the numbers of courses in Dan's categories. Considering that you did recently send me a disk containing the course list, I have therefore been motivated to do some course counting of my own.

First, let me illustrate the various proposals graphically. The rule presently in the TAC Rules of Competition divides up the Drop-Separation plane into two regions as follows:



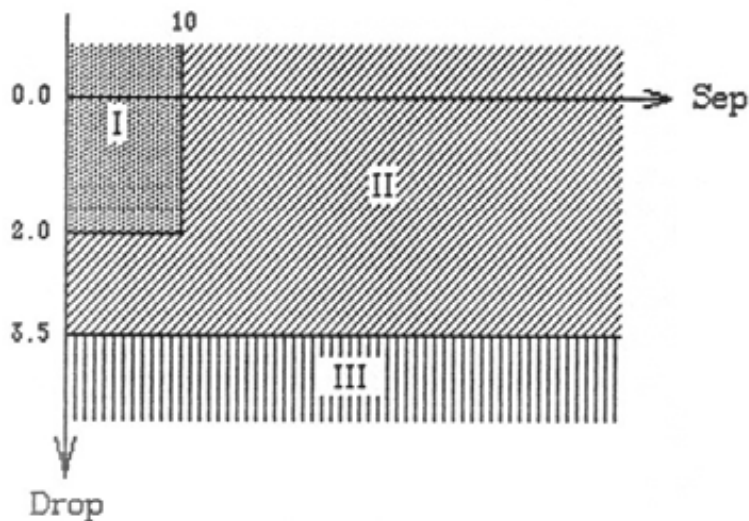
where region I contains the standard Record-quality courses, and region II consists of all other courses—which are eligible for “additional point-to-point records.”

At the 1986 Convention, Ken Young proposed a rule change which was generally supported by RRTC, and received the endorsements of the Records Committee and Rules Committee, and was on a sure route to full approval until the Boston Marathon people realized the effect it would have on them. Ken's 1986 proposal would not have altered either of the numbers now in the rulebook (2.0 m/km and 10%), but would have used those numbers to divide the plane into *three* regions as follows:



where region I consists of the standard record-quality courses, and region II contains courses eligible for "additional point-to-point" records, but marks set on courses in region III would not be listed in the record book at all.

At the 1988 Convention, Dan Brannen resurrected the 1986 Ken Young proposal with one slight modification (obviously chosen for political expediency). Dan simply moved down the boundary between regions II and III far enough so that Boston would fall in region II rather than region III. The three regions in Dan's proposal looked as follows:



So how many courses would fall in these regions in each of the above proposals? I was surprised to see that from the numbers you computed, it is not possible to figure out how many courses are in regions II and III in the 1986 Young proposal and the 1988 Brannen proposal. I therefore did my own scan of the list and came up with the following numbers:

Current Rule:	I) 86.3%	II) 13.7%	III) 0.0%
Young 1986:	I) 86.3%	II) 8.8%	III) 4.9%
Brannen 1988:	I) 86.3%	II) 10.6%	III) 3.1%

You'll note that our numbers don't agree exactly. For region I, my figures say it's 86.3%, while you got 87.4%. Two possible explanations for this discrepancy are:

- 1) We weren't using exactly the same list. I used the list you sent me several weeks ago, while you were probably using a more up-to-date version.
- 2) We may not have counted precisely the same courses from the list. I counted only courses that had clearly stated drop and separation. For example, some courses on the list are marked "<2 <10". I didn't include such courses in my statistics. Did you?

The list you sent me contained 5290 courses. Of those, my scanning program found 2286 courses with listed drop and separation.

It is interesting to note that of these 2286 courses with stated drop and separation, only one (the Arts Festival River Run 12 km — IN 87015 PR) has a drop greater than 31 m/km. Its drop is listed as 82 m/km, and its separation is only 0.46% (which means that its start and finish are only 55 m apart, even though the finish is 984 m lower in altitude than the start)!

It's also interesting to note that there are 9 courses with positive drops but zero separation. One of these (the Wild Cherry 5 km Run — SC 87005 BS) drops 4 m/km even though its separation is zero.

I have enclosed a table of course counts by drop and separation. It's a lot like the table you distributed except that it covers a much greater range of drops and separations. In particular, it was essential to include the case of 100% separation in order to compute the numbers of courses in regions II and III in the Young and Brannen proposals. My table shows the *actual numbers of courses* counted by my program (instead of percentages) so you can better judge the quality of the statistics.

I have also prepared a number of sublists of the course list (enclosed) covering various ranges of drop and separation. These sublists actually cover all courses except those with drop less than 1.0 m/km and separation less than 10%. It is unfortunate, however, that some of the most interesting cases, such as the New York, Boston and St. George marathons, aren't on any of my lists because they were certified too long ago to have the drop and separation figures on the course list.

The biggest of my sublists, with 171 courses (7.5% of the total dataset of 2286 courses), is the one for courses with drop less than 1.0 m/km but separation greater than 10%. These are precisely the courses that are victimized by the current rule. They are not aided significantly by drop, and offer only the *possibility* of wind aid (depending on which way the wind is blowing), but are thrown into the same category as courses with huge amounts of drop.

On the subject of wind, your letter of March 15 says it's "bad" if a runner "toes the line not knowing whether the coming attempt will be considered as a serious effort." I don't understand your concern here. Track runners must face *precisely* this uncertainty. Simply knowing that the venue is record-quality is not enough. The runner will not know until *after* the race whether the wind gauge reading was acceptable for records. What's the

great crime if road runners must face some of this same uncertainty as track runners?

I agree that, in practical terms, there's no way we could come up with a wind-measurement scheme (for road racing) suitable for making that fine legal distinction in judging whether a performance should be approved as a record. So as a purely *practical* matter, the only reasonable procedure is to say whether the *course* qualifies as a record-quality course (and then not worry which way the wind is blowing on race day). Unfortunately, this means that some courses must be disqualified from record consideration simply because they *might* be wind-aided, even though the actual wind on race day could well be a *headwind* in any given year.

By the way, even if it is not practical to devise a wind-measuring scheme precise enough for determining admissibility of records, this should not discourage us from researching the subject of wind aid. When I spoke to Basil at the Convention, he seemed very interested in anything we could do to estimate the aid provided by wind, drop, etc. *whether or not* it has any bearing on the TAC rules for road records.

As I recall, Basil thought that even a rather crude formula for estimating wind aid, perhaps using data recorded by the National Weather Service as input, would be useful to TACSTATS. Such an approach is obviously not suitable for record determinations, but Basil apparently had other uses in mind. One possible application might be as part a scheme for determining runner rankings—which wouldn't require the precision needed when dealing with records. (Basil, since you're getting a copy of this letter, perhaps you could clarify the comments you made at that time.)

I mention this, Pete, because every time we've written each other about modeling the factors affecting running performance, you've always ended by commenting (generally negatively) on the subject of changing the record keeping rules. I just want to point out that modeling of this type can be useful outside the context of changing the TAC rule.

As for the TAC rule itself, my current feeling is that it should include the following:

- 1) For simplicity, it ought to be adequate to divide the drop-slowness plane into *two* regions, similar to the diagram on the first page of this letter, rather than three regions as in the 1986 Young or 1988 Brannen proposals
- 2) Set the dividing points at: 1 m/km drop, 30% separation.
- 3) I like your idea of changing the name for region II; for example, call marks set on those courses "unvalidatable noteworthy performances."

Tightening the drop limit to 1 m/km doesn't really go quite as far as I might like. (The aid provided by a 1 m/km drop is still at least twice as great as the likely error in course measurement.) But it's definitely in the right direction. And adopting the 1 m/km figure has two other advantages: It would exactly match the slope limit for *tracks*, and it matches a proposed IAAF standard for world road records. Setting our drop limit at 1 m/km might hasten the establishment of IAAF road records (and perhaps they'd adopt our separation limit so that everybody would be in agreement).

I think the present 10% separation limit excludes too many courses that provide no significant aid, so this limit should be relaxed. If we increase it from 10% to 30% then, with reference to my table, the number of courses with drop less than 1 m/km, but which exceed the separation limit, would decrease from 171 to 97. As compared with the current drop and separation limits of 2 m/km & 10%, the suggested new limits of 1 m/km & 30% would produce a slight overall *increase* in the number of record-quality courses—from 1,973 courses to 1,997 (i.e. from 86.3% to 87.4% of my 2286-course total).

Wind is a tricky beast. A *loop* course can provide wind aid if the stretches *against* the wind are “sheltered” while stretches *with* the wind allow runners to get the full benefit. On the other hand, because wind is such a strongly *non-linear* effect, a course with significant separation may provide no aid at all because the runners lose so much more while heading into the wind than they gain when it’s at their backs.

Modeling calculations, such as those by Ken Young in the Apr '84 and Jan '86 issues of NRDC News, indicate that under ideal conditions, a runner may obtain some advantage on courses with separations of 20-30%. One characteristic of such calculations, however, is that the advantage is obtained only under a narrow range of wind speeds: If the wind is either too weak or too strong, it becomes a handicap rather than an advantage. I imagine that if the natural gustiness of wind were accounted for in such calculations, the maximum calculated advantage would be further diminished.

Ken actually concluded in his Jan '86 article that the separation limit could be safely increased to 30%. He said at the 1988 Convention that he still supports that position. I suspect that, except in cases of “sheltering”, no meaningful wind aid can be gained from courses with separations up to 30% (although we should probably try checking this statement with some more sophisticated modeling).

Returning to the drop limit, it is interesting to realize that the only reason we now have the 2 m/km figure in the rulebook is because Ken Young was originally thinking in English units. For many years, Ken used a guideline of 10 feet per mile (which is a round figure in that unfortunate choice of units). When it came time to write the TAC rule, Ken did realize that it should be a round number in metric units (or, equivalently, a round number when expressed as a dimensionless ratio). His 10 ft/mile guideline converted to 1.894 m/km, which he rounded to 2 m/km.

Unfortunately, it seems to have taken Ken some time to figure out what his own rule said. In his Apr '84 NRDC News article on drop and separation, he stated, incorrectly, that the permissible drop in a marathon is 262 feet. (Actually, it's 84.4 meters, which is about 277 feet.) Ken was still thinking “10 feet per mile.” Apparently, he forgot that the rule he authored, which was already in the TAC rulebook (having been approved at the 1983 Convention), clearly stated the limit as 2 m/km.

Perhaps if Ken had been thinking in metric units from the beginning, we'd already have the 1 m/km figure in the rulebook.

I'll conclude this letter with a technical note on how I prepared the enclosed scans of the course list. As you know, when I received your DOS-formatted

disk, I had to preprocess it on two other computers before I could get it into my Macintosh. Having grown somewhat familiar with such file transfers, I have now done one more transfer. I sent the file from my Macintosh to a VAX mainframe at work, in this case using a modem hookup. (This transfer was actually extremely slow, taking about 70 minutes for the full course list using the "Kermit" transfer protocol and a 2400-baud modem.)

I put the file on the VAX so I could write FORTRAN programs to scan it. The only programming language I currently have on my Mac is BASIC (although if I really wanted to, I could buy a Macintosh compiler for FORTRAN, or C, or Pascal, or just about any other language I wanted). As I am intimately more familiar with FORTRAN than with BASIC, I was able to write the programs for scanning the list much more quickly by doing it in FORTRAN. (Also, I'm sure that the actual scans of the list took less computer time on the VAX than they would have taken on my Mac.)

Best regards,

Bob

Bob Baumel

cc: Nicoll, Brannen, TACSTATS

PS: I have just received your letters on the "matrix". I'm sure this took some work, as you couldn't just do a computer scan (because so many of the certifications were old ones without listed drops and separations). One observation on this "matrix": If we change the limits from (2 m/km, 10%) to (1 m/km, 30%), we'd lose only one course now considered record-quality (WA 8 km Nordstrom Beat the Bridge), while picking up *eight* other courses that are excluded by the current rule.

PPS: *I see that my first sublist contains quite a few cal courses. I didn't think of weeding out the cal courses when I wrote the scanning program. Hopefully, this doesn't screw up the statistics too badly.*

THE ATHLETICS CONGRESS
OF THE USA

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Peter S. Riegel, Chairman

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614-451-5617 (home)
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telex 245454 Battelle

March 28, 1989

Bob Baumel - 129 Warwick Road - Ponca City, OK 74601

Dear Bob,

I hoped you would find a way to play with the course list, and it seems you have succeeded. I've spent many a pleasant hour wasting my time in anal-retentive pursuits, and perhaps you have caught this disease.

I am practically computer-illiterate, knowing only rudimentary BASIC, which I have largely forgotten since I acquired 1-2-3. I can work in WordPerfect too, which is how I do all my sorting, except when I shuffle something into 1-2-3. WordPerfect has some deficiencies when sorting numbers. With your greater literacy I hope to see all sorts of wild and woolly things come up.

I have been tempted, from time to time, to try to bring the course list totally up to date, but the job is huge, requiring a calculation of each drop and sep. Also, the little note in the drop/sep space of NRDC courses tells Joan and me where the course is filed. All the NRDC courses are filed in one continuous file, by state, distance and town. All the later ones are filed in one-year file boxes, by state and course number. As things stand we can find any given cert with no trouble. If drop/sep info is needed on a given course we can find the cert, or look up the data in the last printed NRDC list, which covers the NRDC certs we have on file.

By not entering drop/sep on the NRDC courses, we keep the list such that we will know where to look for a given cert when the need arises.

It would be a pretty rough job refileing all those NRDC courses, and the end benefit would be paltry. It would allow us to play statistically with the entire list. However, we now have enough new courses with drop/sep listed to get a statistical picture that's pretty good.

As your analysis pointed out, we have several courses with zero sep and non-zero drop, an obvious impossibility. We are willing to change this when we find errors, but are not attempting anything so foolhardy as trying to make the list perfect. When I am made aware of an error, I put it on a pile that I deal with bimonthly.

We deal with drop and sep as follows: If the sep is absolutely zero (same point) we call it zero. Anything non-zero but less than 1 percent gets called "1". This separates closed loops from the rest. Some people have submitted pretty straight road courses with "100" as sep, but we are thinking of using 99 instead, since nothing but a cal or a straight-shot mile has a true 100. So far we list them as we get them.

Joan and I work as a team on the courses. She enters all the data and makes up the lists for MN, and answers requests for certs. I play with the big lists on the computer, and keep things up to date. As her fluency with WordPerfect grows she may expand her range, but I expect I'll be doing it for a while, since I get a kick out of it and she does not. She does enjoy interfacing with the various folks who write in, and is getting to know several of the certifiers better and better.

Cascade Run Off was improperly annotated in the NRDC list. Here is a corrected matrix. It hasn't changed much. Chicago is not on it, since it was not on TACSTATS' list of the biggies. Neither was Columbus.

Now for your letter:

Your Apple graphics are very nice, and clearly define the subject under discussion.

The list I used was the same as yours, except that I dropped NRDC, cal's, and the "<2 <20" courses. The basic conclusions are the same and I see no reason for either of us to rework.

As for Ken's proposal, I think many of us were kindly disposed toward it because it came from the record-keeper who was doing the work. I know I always tried to support Ken whenever I thought it would make his job easier. How would we have responded if Dan had made the same proposal, and Ken was doubtful? Would we have so enthusiastically responded? I suspect not. I think we might have tried to see how it would have affected Ken first, out of respect for the work he was doing.

Since TACSTATS now does the work I'm inclined to let them do it as they choose, unless something deeply offends me, and so far I see little to criticize. They may wish to change or not. I'm content that they are aware of the variables, perhaps better than anybody. Their opinion has a lot of weight in my mind.

As for wind, I may be wrong but I think the track folks use wind gauges only for sprints, and that multiple-lap races don't use it. I never heard of a 400 meter or a 1500 meter record shot down for wind. A 100 meter guy can afford to have a record attempt shot down by wind - after all, he can try again in a week or two. But a 10k or marathon attempt uses up the runner, and he should be in no doubt at the onset that he can go for it without fear that wind will negate his effort.

The technical challenge of trying to estimate a "good" figure for the effect of wind or slope may be fun to rise to, but I hope it never enters the picture as an official criterion. Records are best when simply stated. If they get obscured in technical mumbo-jumbo they lose their clarity. For that reason I am not in sympathy with Track & Field News' attempt to segregate sprint records set at altitude. After all, Mexico City is in the world.

Determination of wind and slope aid may be appropriate for TACSTATS to make various ranking models, and that's to the good. It adds fun to the game.

Let's assume that God passes down the true dope as to wind and slope. What, then, should we do with it? Seems to me we'd be right where we are now. We have to decide how much is too much. Actually, we don't have to decide. The LDR Committees and the Records Committee have that job. I think we are fulfilling our RRTC mandate very well on this issue so far. Thanks to our efforts we now have lots of facts and figures that did not exist when Dan made his proposal.

Now, if a change is made, it will be made with some real knowledge as background. We think we have an idea of the effect of drop and wind, and we also have an idea of which races will be affected by any change.

Any change that's made will be disagreed with by many people to varying degrees. Whose opinion should carry weight? I'm inclined toward the idea that participation in the ongoing discussions should buy one a bigger voice. Lots of people would just like to show up and vote, and I don't like that at all. Of course, I don't have to like it. I just think that being a worker should buy one more rights than being a bystander.

I don't know what more we can do technically on this. I've reached a dead end on it, and I think we've provided all the grist we have available at this time.

Best regards,

Pete

O'Neill and Walters are Aces in Las Vegas

By STEVE LEWALLEN
Jim O'Neill, M50, of Toledo, Ohio, and Harolene Walters, W45, of Mission Viejo, Calif., turned in the best masters age-graded times in the Las Vegas Marathon on February 4. When O'Neill's actual time (2:25:46) is multiplied by his age-group factor (.8926), the resulting 2:10:07 was the best of the day. Walters', 2:54:11 (2:39:50 when age-graded) gave her the top female masters spot in both actual and age-graded times. O'Neill, running in his first-ever marathon, set a new national M50 age-group record and was awarded \$1,000 for his effort. His time was five seconds faster than Norm Green's recognized AR of 2:25:51. Walters also received \$1,000 for her masters win.

FROM
NORM
GREEN

Stephen Lester, M45, was second best age-graded competitor; his 2:25:08 gave him an adjusted time of 2:14:16. The men's masters winner, Athol Barton (M40, 2:22:09), had the third-best age-graded time of 2:15:54. His masters victory garnered him \$2,000 in prize money.

Also of interest was Richard Bird's 3:10:00 (3:01:38 when age-graded). This marks the 42-year-old runner's 53rd marathon since April 22. He plans to finish with about 74 marathons in 52 weeks . . . perhaps in Boston.

Overall winners were Frank Plasso, 25, and Miguel Tibaduiza, 30 (tie, 2:13:14), and J'ne Day (25, 2:40:45). The 942 runners, the largest field ever assembled for the race, competed in cold and windy conditions. □

405 Curtis Court
Wayne, PA 19087
March 26, 1989

Linda & Basil Honikman
Pete Riegel
Jack Moran
Ken Young

Dear Friends:

My ox has been gored. While I acknowledge that every record is made to be broken, I prefer that the achievement of a new record be legitimate (meaning in fair competition on a standard certified course without wind aid, etc.).

The enclosed article appeared in this month's National Masters News. When I saw the article, I asked myself if this runner was for real, if the course were certified, if it was downhill, and in what direction the wind was blowing? After all, I was cheated out of tenth Masters finish at Boston in 1983 by a "known" Canadian cheater and so am sensitive to the many issues involved in full and fair competition.

Each of you has data available and the mathematical/statistical skills to massage those data to discover the answers to the questions posed in the most recent TACTIMES and at the RRTC session in Phoenix which I attended and expressed my concerns.

I need your technical help as a resource, because I intend to be very proactive among the LDR committees to deal with the tabled rule. Articles such as the enclosed should never see print, at least in this form. At the very least they should be expressed to state what we know about this effort: the course drops at a rate three times the accepted level (it is recorded as dropping 6m/km), and somewhere else I read that the "windy conditins" was in reality a 30 mph tail wind on this point to point course.

For goodness sake let us generate the technical data needed to assess aid both in regard to downhill courses and in regard to tail winds on a point to point course. If we have the technical resources in place, then it will be the accountability of the several LDR committees to reach a consensus and to negotiate with the Rules Committee. I do not minimize the latter effort, but have finally seen the wisdom of Pete's dictum that the role of RRTC is to generate technical data, while the LDR committee's role is the political one.

Thanks for whatever help you can provide. I am one runner who will be intensely interested in your findings.

Sincerely,



Norman M. Green Jr.

THE ATHLETICS CONGRESS
OF THE USA

Road Running Technical Committee
Peter S. Riegel, Chairman

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614-451-5617 (home)
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March 30, 1989

Rev. Dr. Norman Green, Jr. - 405 Curtis Ct - Wayne, PA 19087

Dear Norm,

Thanks for your letter of March 26. Since the TAC Convention we have been busy examining many of the technical and political dimensions of the Great Drop and Separation Debate. Your letter provides some of the human perspective which is the most important part of the whole thing.

First, the 1989 Las Vegas Marathon course is real. Here is a copy of the certificate. Drop = 6 meters per kilometer. Separation between start and finish = 39 km = 92 percent.

The course most definitely falls within the limits of the present definition of a point-to-point course, "possibly aided by wind or slope." Should O'Neill's performance survive the scrutiny of the Records Committee it will probably be listed as a new M50 point-to-point record. It will not affect your possession of the "real" record.

You presently hold the fastest M50 and M55 point-to-point marks with your Twin Cities Marathon runs. Twin Cities has a drop of -0.9 m/km (slightly uphill) and a separation of 31 percent.

On the face of it, it seems ridiculous to compare performances between Las Vegas and Twin Cities, since the downhill aid at Las Vegas is quite large. Nevertheless, as long as any records on non-loop courses are recognized, the records will generally be set on the fastest course.

At this time nobody has figured out any realistic way to deal with wind, except to limit separation and accept what the day has to offer. That's why Twin Cities, in spite of being slightly uphill, is in the "possibly aided" category. Note that Las Vegas with a headwind would probably be a very tough run, downhill or not. I have no knowledge of the wind conditions during O'Neill's run, nor do we have any way of dealing with them.

My second footrace was the Boston Marathon, in 1974. I went there with a 3:30 goal, and managed a 3:20, aided greatly by a perfect, cool, sunny day and a whopping tailwind. I was not fooled at all - I knew I had been given a gift, and I accepted it with gratitude. If it had been a fast time, I don't think it would have bothered me to have people look at it with skepticism. It would still be a good time, and at Boston, the daddy of them all. In my view Boston is not a course that should be compared with flat courses. In spite of the vaunted "Heartbreak Hill", it's definitely a course where the conditions generally favor fast times.

If it wasn't for the money aspect, I suspect that the glory of a Boston win would easily surpass the glory of a WR time at a lesser venue. Boston, New York, London - there are many big-city courses that are laid out to suit esthetic qualities. Must they be considered as record-quality simply because they are big and important? There's more to the game than records. Those three courses are a fine runners' experience, and they are real, in the sense that they each tour the area in the classic point-to-point manner, as the marathon was originally conceived. Poor Phidippides certainly wouldn't have run the long way round if Athens had been only 4.2 km from the Plains of Marathon.

A records system, if it is to have validity, must attempt to eliminate extraneous elements, leaving only the runner's performance itself to be considered. If it tries to include every possible venue, the resultant records will be set on a narrow minority of extreme courses. Thus some venues must be left out of the range of consideration.

Since we cannot cope with wind, we will probably continue to limit the separation of courses, and not attempt to equate performances on flat point-to-point courses with those set on loops. However, Brannen's proposal that drop be limited to 3.5 m/km would eliminate most of the courses with extreme drop.

However, if such a proposal is adopted we wind up with three types of courses rather than the present two. We'd have loop courses (real record quality), point-to-point courses with limited drop (potentially aided by wind, and certainly aided by drop), and, finally, courses that have such extreme drop that we simply ignore them.

My personal view is that one set of records is enough, and that only loop records should be recognized by TAC. As I said in the RRTC meeting, I see little reason to spend time fine-tuning our wastebasket. I also think it is an exercise in futility to try to keep the media from misinterpreting our view of truth. If our hearts are pure we ought to be able to cope with people misunderstanding how we do things.

I recognize there are other opinions, and that we will probably never reach an accord that satisfies everybody.

National Masters News said that O'Neill set a new M50 record (true, if it passes scrutiny, and only as a point-to-point record). They also said the time was 5 seconds faster than your recognized AR (the "real" record). They actually said nothing that was not true, but the implication was that you had been displaced, which isn't so.

Inaccuracies in the press are so numerous that a person could spend his life trying to correct them. All of us in the running game know that the media seize upon the fastest time they can find to talk about, even in the sprints, where they will go on about wind-aided 100's as though they were real. I don't think TAC can do anything about this, except to limit what we refer to as "records."

It has been suggested that we take a good look at our present definition of a "loop" course, limiting drop to 1 or 2 m/km (present value 2 m/km) and

extending separation to 20 or 30 percent (present value 10 percent). These would be the only record courses. All performances set on any other courses would be listed (if at all) as "unvalidated notable performances possibly aided by wind or slope." Nowhere would they be called "records." This is one solution to the problem, and it is a simple one.

What do you think of such an approach? Would it, to some measure, heal the wound on your ox? Your grievances to this point have been general rather than specific, and I have no idea of what solution you might specifically propose or endorse.

An accurate assessment of the effect of wind and slope is difficult. The variables involved are not easily measured, and are dependent to some degree on individual physiological parameters. We'll probably never do better than an educated guess.

If you hope for a way to account for wind or its absence, you probably hope in vain. The odds are against courses with large separation ever being considered for records, simply because we cannot deal with the question of wind. There is no reasonable way to look at every single race as a separate case, trying to finely analyze every variable. There will always be some element of runner's luck, in the form of climatic conditions. What we can do is to try, by putting limits on acceptable record-quality course design, to see that wind and slope effects will average out to a near-zero value.

It is important to keep in mind that race directors are the people who make all our fun possible, and their opinions must be given some weight. They are players, just as we are, and in fairness we must see that they get their fair share of the fun. We have to find a decent balance.

RRTC has run a bunch of numbers, and made a breakdown of how the major courses fall in the drop/separation matrix. We have done some estimating of the potential effects of wind and slope. At this time I think we have done about all the technical stuff we can, except for some fine-tuning. From here on it will be the task of the LDR Committees and the Records Committee to wrestle through the problem, and come up with something that is palatable to the TAC constituency.

The problem has generated a pile of correspondence, and you'll see it boiled down in next Measurement News.

Thanks for writing. I hope to hear from you again.

Best regards,

A handwritten signature in cursive script, appearing to read "Pete".

xc: TACSTATS, Baumel, Nicoll, Brannen

Computer Program for Course Measurement Calculations

by Bob Baumei

For the past several years, I've been using a program that I wrote to help me check the calculations in applications for course certification. I originally announced this in the July 1987 issue of Measurement News, but perhaps you missed that item (or have acquired a computer more recently). Several certifiers in Western states now use this program, but many more certifiers and measurers would probably be interested if they knew about it.

I wrote this program in BASIC. It now runs on an Apple Macintosh, but can probably be adapted for other computers without too much trouble.

The program accepts the raw data of a measurement, and produces a report of the results. It also saves the raw data in a file so you can recalculate the measurement (with minor changes) *without* having to re-enter all the data.

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 and validation measurements.
- ◆ Calculates distance for every split-to-split interval for each measurement; also finds sum of the "better" (shorter) measurements of all intervals ("Sum of Shortest Splits").
- ◆ Handles 5 or 6 digit Jones counters; accounts for counter wraparound at 00000 or 000000.
- ◆ Accepts calibration data recorded with or without wheel-freezing. When wheel-freezing is used, lets you avoid duplicate entries.

The main limitation of this program is that counter readings *on the race course* must form an unbroken sequence; if not, you may need to run the program several times to fully analyze the measurement.

I am distributing this program free of charge. If you'd like a copy:

- 1) If you have a Macintosh, I can send it to you as a standalone Macintosh application. Tell me which model Mac you have, and which version System software you're running, and send a blank 800 kb floppy.
- 2) If you have an IBM-compatible, I can send you the BASIC source code, plus documentation, as MS-DOS text files—probably in your choice of floppy format (you supply the blank). You will have to adapt the code to run on your machine.

SAMPLE OUTPUT FROM CALCULATION PROGRAM

Bloomsday 1987 Validation

Measured: 87/10/18

Length of Calibration Course = 300 m

Measurements Computed using AVERAGE Constants WITHOUT 1.001 factor

Bob BaumeI			Mike Renner		
Pre-Calibration:					
Start	Finish	Counts	Start	Finish	Counts
137650	140456.5	2806.5	32900	35727	2827
140500	143306	2806	35700	38527.5	2827.5
143400	146206	2806	38500	41327.5	2827.5
146300	149106	2806	41300	44127.5	2827.5
Working Constant: 9353.7500 counts/km			9424.5833 counts/km		
Post-Calibration:					
284200	287005.5	2805.5	81000	83825.5	2825.5
287100	289905.5	2805.5	83800	86624	2824
290000	292805.5	2805.5	86600	89424.5	2824.5
292900	295706	2806	89400	92224	2824
Finish Constant: 9352.0833 counts/km			9415.0000 counts/km		
Constant for Day: 9352.9167 counts/km			9419.7917 counts/km		

Course Measurement:							
	Counter	Interval	Interval		Counter	Interval	Interval
	Reading	(counts)	(meters)		Reading	(counts)	(meters)
Start	164000				60000		
Merge Spr & Riv	175800	11800.0	1261.64		71886.5	11886.5	1261.86
1 mile	179081	3281.0	350.80		75190	3303.5	350.70
Merge w. Main	191075.5	11994.5	1282.43		87276	12086.0	1283.04
2 mile	194145	3069.5	328.19		90365.5	3089.5	327.98
3 mile	209219.5	15074.5	1611.74		05543	15177.5	1611.24
5 km	210836	1616.5	172.83		07170.5	1627.5	172.77
4 mile	224291	13455.0	1438.59		20717.5	13547.0	1438.14
5 mile	239389	15098.0	1614.26		35928	15210.5	1614.74
6 mile	254472.5	15083.5	1612.71		51108	15180.0	1611.50
10 km	257689	3216.5	343.90		54348	3240.0	343.96
7 mile	269547.5	11858.5	1267.89		66286	11938.0	1267.33
Finish	276427	6879.5	735.55		73214	6928.0	735.47
Totals:		112427.0	12020.53			113214.0	12018.74

(Sum of Shortest Splits = 12017.37 meters)

Note: Complete report of above Validation appeared in Jan 88 Measurement News.

VALIDATION OF 1988 CITY OF ALHAMBRA MOONLIGHT 8K RUN

Narrative Report

Saturday February 11, 1989

Due to fogged-in S.F. Airport, Tom Knight's 9:10 AM departure flight is cancelled, and he is switched to a 1:40 PM departure flight which does not actually take off until after 3:00 PM. Tom Knight arrives at Hollywood Burbank Airport at 4:00 PM and is met by Ron Scardera. Due to United Airlines losing Tom's front wheel and bike helmet, more time is wasted at the airport, and Ron and Tom finally leave at 5:00 PM from the airport, heading to Alhambra. At approximately 5:30 PM, Ron and Tom meet up with William Kinman at start/finish of 8 km race course. We three drive over course route including stops for observations at start/finish, turnaround point and construction area where road is being changed. (We have to steel tape this part of course the next day, as we won't be able to bike it, but blueprints handed to Tom and Ron by William Kinman and still standing lampposts etc. will be adequate to define the route.) Tom and Ron return to a great pizza dinner cooked by Ron's wife Ronnie. Tom stays overnight at Ron's house.

Sunday February 12, 1989

We had agreed to meet with William Kinman and Robert Hickey (course measurer) at 8:00 AM at the start/finish area. Ron Scardera and Tom Knight arrive at Police Academy 880 yard calibration course and start calibrating at 7:45 AM. It is in Tom and Ron's mind a terrible calibration course: hilly, curvy, and must be ridden on cement gutter for accuracy and safety of rider. Ugh!! Both Tom and Ron get some suspicious calibration rides and, to top it off, Ron's Jones counter gets bent and stops working properly. We fix Ron's counter, note that the temperature was 43F but starting to rise rapidly, and decide to steel tape a short cal on-site calibration course. Ron and Tom arrive at 9:00 AM at start/finish to meet Bob and Bill about one hour late.

With help of Robert Hickey's measuring wheel, we lay out a 1025 foot short calibration course on Raymond Avenue next to Alhambra Park. At 9:50 AM (59 F) Ron, Tom, and Bob calibrate their bikes. From 10:16 AM to 11:40 AM, we measure the course along SPR as available to runners on race day. (We have to freeze our front wheels and carry our bikes past the construction area we will steel tape later.)

From 12:00 noon until 12:40 PM, we steel tape the short calibration course: Robert Hickey - rear tapeman; William Kinman - assisting Robert Hickey; Ron Scardera - head tapeman; Tom Knight - marker at head tape and on masking tape strips. Although cal course was 2.5 meters out from curb edge, we were able to triangulate and steel tape for safety's sake along curb. Result of steel taping (using 2 different tapes we have 2 results): 1026.54 ft & 1026.56 ft = 1,026.55 ft at 64F uncorrected for temperature or 1026.524 feet (312.884 meters) temperature corrected.

From 1:00 PM - 1:45 PM Lunch.

From 2:00 PM - 2:30 PM, steel taped part of course it was no longer possible to bike. With aid of blueprints and still standing lampposts, we steel taped this with Ron Scardera lead tapeman, Robert Hickey rear tapeman, William Kinman assisting and Tom Knight supervising and observing. (Ron sinks both feet deep in mud at one point.) Result of taping 214.2 feet (65.29 meters x 2 = 428.4 feet (.3048 meters/foot) = 130.58 meters. We almost forgot the factor of 2 needed, since the runners pass through this part of the course on both the way out and back.

We do a quick calculation to verify that both Tom Knight's and Ron Scardera's measurements come out well in excess of 8,000 meters and shake hands with Bill and Bob so they can get back to their homes to do what they need.

Because he's crazy, Tom Knight calibrates up and back on the short cal course at 3:00 PM and Tom and Ron head back to the Police Academy cal course again. At 3:45 PM, Tom again attempts to calibrate on Police Academy 1/2 mile and again gets some suspicious calibration rides as well as has terrible time with the traffic. Tom decides to abandon any attempt to use any of his calibration rides at Police Academy to compare with the short on-site calibration course. Tom wishes he had never come near the Police Adademy calibration course and followed Ron Scardera's advice to go directly early in the morning to the start/finish of race course to set up short calibration course.

Tom and Ron return to Ron's house to another wonderful dinner prepared by Ron's wife Ronnie. Ron drives Tom to Hollywood Burbank airport to catch his 7:15 PM flight. It leaves on time.

Tom Knight arrives back at S.F. Airport at 8:30 PM. United Airlines still has not found his box containing his front bicycle wheel and bike helmet.

Monday February 13

At 3:30 PM, United Airlines drops off box at Tom Knight's neighbor's house containing his front wheel and helmet.

Thomas D. Knight



By CLAY KALLAM
Sports Editor

It's always the skinny little guy at cocktail parties, drinking the Perrier water.

"Oh yeah," he'll say, regaling some lovely young thing, "I ran 15 miles this morning — just to warm up, you know —

4/3/89

H. Pete /

Some more humor.

How about next year

You go to Alhambra and I'll go to Rio!

Keep up the good work,

My family & job keep me

pretty busy but my job

is way less hectic than

it used to be as our

machine almost works

now.

Tom Knight

I'm not a runner — so what's the big deal?

From 1980
Reel Mountain
RMA

because I'm getting ready for the marathon in two weeks. Never felt better since I started running."

As you sit, nursing your bourbon and seven, trying to ignore the calories collecting in your stomach from that fifth helping of clam dip, this odd sensation creeps up your spine and lodges somewhere in the brain. It's called non-

tual horror of forcing your

all-time-reliant body onto the streets in the cold.

Aside from the pain of running, it's not all good for you. Runners, you may have noticed, tend to have wind-burned faces, even when the sun doesn't shine. Those tans they acquire in the summer turn to wrinkles early on, and those stringy little muscles only appear in the legs. Upper bodies of serious runners are always embarrasingly soft.

athletes, simply because there's nothing there.

Much has been said about how boring runners are, and it's certainly the truth. Of course, spending two hours a day running cuts into time for more civilized pursuits — such as reading or conversation. The joys of running with a companion are severely overrated for it's difficult to discuss the importance of Sartre in today's society when every phrase is punctuated by a heavy pant. Of course, if both parties are sadists, it's not too bad, because they then can derive much pleasure from the other's suffering, but there's little to be gained from hours of mindless jogging.

"Ah but what about those glorious insights runners have?" says a doubter. "What about those moments of inspiration that come after hours on the road?" Well, those same insights can be attained by spending hours in a bar. If you put in enough time anywhere, something's bound to come of it. It's just that running takes so much time, insights can only come then.

And that skinny little guy talking to that gorgeous young thing? Well, you'll notice that now she's doing all the talking — about running. If you get close enough, you can hear her talk about shoes and weekly mileage and dehydration and carbohydrate loading and other sweet nothings. And you'll notice his eyes are glazing slightly — not with love, but with boredom. He also needs to sit down, since his legs are about to collapse.

And the Perrier water? Well, ever since he started running, he can't drink any more — his body just won't accept it.

Now that's something to get upset about.



And that skinny little guy talking to that gorgeous young thing? Well, you'll notice that now she's doing all the talking — about running. If you get close enough, you can hear her talk about shoes and weekly mileage and dehydration and carbohydrate loading and other sweet nothings. And you'll notice his eyes are glazing slightly — not with love, but with boredom. He also needs to sit down, since his legs are about to collapse.

And the Perrier water? Well, ever since he started running, he can't drink any more — his body just won't accept it.

Now that's something to get upset about.

FROM
TOM KNIGHT

MEASURING WITH A CALIBRATED AUTOMOBILE

In a 1987 MN I asked people to send in some data for evaluating how odometer miles varied with Interstate miles. The intention was to get a handle on whether we might be able to use cars for measuring. Mike Wickiser and Mike Renner responded right away. I looked at their data and saw nothing remarkable - it varied more or less as one would expect.

Recently I went to Canton, OH on a measuring job, and calibrated my car on the way. The Mikes got data at every single mile, but I just grabbed a milepost every so often. Everything looked about right until I got to Milepost 95 on Interstate 77. It's in the attached data.

In using a car to measure it's assumed that Interstate mileposts are more or less correct. After this experience I am no longer convinced of this. If you get a long stretch of "good" followed by a glitch, maybe a decent constant can be gotten, after you discount the glitch.

The I 77 anomaly probably came about when two separately-built sections were connected. The mileposts didn't come out exactly right, so they adjusted them, just as we adjust misplaced splits after we measure. But somehow things went wrong.

It would certainly be nice if we could find a way to use autos to measure very long road courses for certification. Only two beyond-the-marathon point-to-point road courses have been certified, the Edmund Fitzgerald 100 km and the Philadelphia-to-Atlantic City 100 km. Both were done with bikes.

Bike measurement of a very long course can be a horrendously time-consuming job, and if we could find a way to do it with a calibrated auto, more people would be encouraged to get the distance right. Most long races have very few competitors and a low budget, so it's a real labor of love to do a full-bore certification of such courses.

As things stand, I'd guess that a SCPF of about 5 m/km might be about right for the job, but there's really no good data to support this opinion.

While laying out the course in Canton I first drove over it with my car. Here's how the comparative measurements came out:

CANTON LITE TRIATHLON - BIKE COURSE

	CUM MILES BY BIKE	AUTO ODO	CORR ODO	M/KM ERROR
START	0	0	0	
BRUNERDALE	2.059	2.05	2.056	-1.21
FULTON	4.327	4.34	4.353	5.93
STRAUSER	6.879	6.86	6.881	0.30
I 77	9.176	9.15	9.177	0.13
MARKET	17.890	17.82	17.873	-0.95
25th	22.967	22.87	22.939	-1.24
FINISH	24.408	24.32	24.393	-0.62

MIKE RENNER'S DATA
 I-90 BETWEEN SPOKANE AND GEORGE, WA
 60 TO 70 MPH - 13" STUDED SNOW TIRES
 DRY PAVEMENT, 1984 RENAULT ENCORE
 20 MILE WARMUP BEFORE READING

ODOM 11-29-87		ODOM 12-6-87		ODOM 12-13-87	
0.62				0.33	
1.59	0.97			1.38	1.05
2.6	1.01	40.39		2.4	1.02
3.65	1.05	41.41	1.02	3.45	1.05
4.7	1.05	42.46	1.05	4.46	1.01
5.7	1	43.49	1.03	5.46	1
6.7	1	44.48	0.99	6.49	1.03
7.72	1.02	45.5	1.02	7.51	1.02
8.74	1.02	46.51	1.01	8.54	1.03
9.78	1.04	47.55	1.04	9.55	1.01
10.79	1.01	48.55	1	10.61	1.06
11.84	1.05	49.62	1.07	11.62	1.01
12.88	1.04	50.63	1.01	12.67	1.05
13.89	1.01	51.68	1.05	13.69	1.02
14.9	1.01	52.68	1	14.7	1.01
15.91	1.01	53.69	1.01	15.71	1.01
16.92	1.01	54.7	1.01	16.8	1.09
18.02	1.1	55.8	1.1	17.8	1
19.01	0.99	56.8	1	18.86	1.06
20.01	1	57.86	1.06	19.9	1.04
21.11	1.1	58.9	1.04	20.92	1.02
22.13	1.02	59.9	1	21.94	1.02
23.15	1.02	60.94	1.04	22.97	1.03
24.18	1.03	61.94	1	24	1.03
25.2	1.02	63	1.06	25.02	1.02
26.22	1.02	64.01	1.01	26.04	1.02
27.25	1.03	65.03	1.02	27.09	1.05
28.29	1.04	66.08	1.05	28.1	1.01
29.31	1.02	67.1	1.02	29.14	1.04
30.34	1.03	68.12	1.02	30.15	1.01
31.38	1.04	69.12	1	31.2	1.05
32.4	1.02	70.18	1.06	32.2	1
33.4	1	71.19	1.01	33.24	1.04
34.44	1.04	72.22	1.03	34.24	1
35.45	1.01	73.22	1	35.25	1.01
36.45	1	74.24	1.02	36.28	1.03
37.47	1.02	75.25	1.01	37.29	1.01
38.48	1.01	76.27	1.02	38.3	1.01
39.5	1.02	77.29	1.02	39.32	1.02
40.51	1.01	78.3	1.01	40.31	0.99
41.51	1	79.3	1		

This is only a partial listing of Mike's data, but it shows the general picture.

MIKE WICKISER'S DATA
 I-76 FROM AKRON TO YOUNGSTOWN
 1986 THUNDERBIRD - P215-75R14 TIRES
 36F - 58 MPH

CHECK OF MILEPOSTS VS ODOMETER
 PETE RIEGEL - 1978 LINCOLN
 65 MPH ON INTERSTATES 70 AND 77
 MARCH 4, 1989

MPOST	ODOM MI	INT M
32	27.2	
33	28.2	1
34	29.1	0.9
35	30.1	1
36	31	0.9
37	32	1
38	32.9	0.9
39	33.9	1
40	34.8	0.9
41	35.8	1
42	36.7	0.9
43	37.7	1
44	38.6	0.9
45	39.6	1
46	40.5	0.9
47	41.5	1
48	42.4	0.9
49	43.4	1
50	44.3	0.9
51	45.3	1
52	46.2	0.9
53	47.2	1
54	48.1	0.9
55	49.1	1
56		
57		
58		
59		

I 70 FROM COLUMBUS TO CAMBRIDGE, OHIO

MILEPOST	ODOMETER	INTERVAL
111	20.6	
119	28.55	0.9937
120	29.55	1.0000
128	37.5	0.9937
135	44.45	0.9929
143	52.42	0.9962
149	58.4	0.9967
151	60.42	1.0100
167	76.41	0.9994
173	82.4	0.9983

I 77 FROM CAMBRIDGE TO CANTON, OHIO

MILEPOST	ODOMETER	INTERVAL
45	92.5	
47	94.49	0.9950
51	98.45	0.9900
57	104.4	0.9917
65	112.4	1.0000
71	118.34	0.9900
79	126.34	1.0000
84	131.33	0.9980
92	139.3	0.9962
95	142.61	1.1033 ????
96	143.59	0.9800
97	144.5	0.9100
98	145.48	0.9800
99	146.42	0.9400
100	147.35	0.9300
101	148.3	0.9500
102	149.29	0.9900
103	150.22	0.9300

Note the anomaly at Milepost 95 between Cambridge and Canton. I was driving along expecting that milepost to appear at about .3, and I waited and waited until it finally appeared at .6. Since the succeeding mileposts all came up at about 1 mile each, I can only conclude that there is a jog in the placement of the mileposts in I 77.

Furthermore, the intervals between mileposts seems to have decreased all of a sudden, from about .99 odometer miles to .95.

Does anybody have another explanation?



The Athletics Congress of the USA

200 South Capitol Avenue, Suite 140, Indianapolis, Indiana 46225 (317) 261-0500
Cable Address: ATHCONGRASS IND • Telex 27-332 • FAX (317) 261-0481

National Governing Body for Athletics in the United States

Please reply to:

PETER S. RIEGEL, Chairman
Road Running Technical Committee
3354 Kirkham Road
Columbus, OH 43211
(614) 424-4099 (Office)
(614) 451-5617 (Home)

Capair Inc. - 2330 S. Susan St. - Santa Ana, CA 92704
Att: Dave Girard

April 5, 1989

Dear Mr. Girard,

I enjoyed our conversation today, and was especially heartened at the prospect of your new tire becoming available to the community of road race course measurers.

I enclose a copy of our newsletter, as well as a copy of the book that tells how we do it. As you can see, it's done with calibrated bikes. The secret to accuracy is in the calibration, and pneumatic tires change size with time and temperature.

I've tried the "Eliminator" tire insert, but didn't like it much. The ride was hard and the calibration variation was more than I liked.

An English friend gave me one of the last Sure Trak wheels in existence, and I've used it with complete satisfaction for the last year. Other measurers weep when they see how little my calibrations vary. Enclosed is a graph showing the variation of my Sure-trak tire. It seems to stay well within a range of 1/1000, and that's super.

Our community of measurers is small, but I expect to see a surge of interest when they see that something like the old Sure Trak is once again available. It's especially interesting that you have purchased the old Sure Trak molds.

In addition to small calibration variation, professional measurers like the idea that the tire won't go flat. Occasionally I've measured a course 3 minutes ahead of the marathon field, and believe me, there's no time to fix a flat under those circumstances.

I'm looking forward to receiving the prototype to work with. I'll send you data as I generate it. If it works as I expect I'm sure the course measurers around the world will beat a path to your door. You may be sure of lots of publicity through me to them. We need every good tool we can get.

If you have any preliminary information on what you will have available, please send it along and I will put it in Measurement News.

Best regards,

NATIONAL OFFICERS President/Frank E. Greenberg, 12 South 12th Street - Suite 1414, Philadelphia, PA 19107 • Executive Vice-President/Larry Ellis, Jadwin Gym, Princeton University, Princeton, NJ 08544 • Vice-President/Wilie Banks, 2323 Bentley - #305, Los Angeles, CA 90064 • Vice-President/Bill Roe, P.O. Box 2277, Bellingham, WA 98227 • Vice-President/Charles M. Ruter, P.O. Box 91053, Fern Creek, KY 40291 • Secretary/Barbara Palm, 229 Mt. Hope Drive, Albany, NY 12202 • Treasurer/Stan Wright, 7955 LaRiviera Drive, Sacramento, CA 95826

FINISH LINES	
TIME	PLACE
1:04:16	589

Finish Line Sub-Committee
 Alan Jones, Chairman
 3717 Wildwood Drive
 Endwell, NY 13870
 (607) 754-2339
 May 1989

PRINTED RESULTS

When I tell a non-runner that I'll be scoring a running race on the weekend, I often get the reply, "Scoring a running race? What is there to score?" When I explain about age-group results they usually understand. I don't bother going into all the information that runners like to see in their results. For example, here are some abbreviated results from a race I scored recently:

Sixteenth Annual FORKS XV
 FIFTEEN KILOMETER ROAD RACE
 Triple Cities Runners Club

TAC/RRCA Certified. Registration No. NY-84013-AS

Chenango Forks, NY April 2, 1989 2:00 P.M. Weather: Sunny, windy, 50 deg

PLACE	Team	Sex/Sex	Div/Div	NAME	AGE	S	TOWN	ST	CLUB	TIME	Mile	Perf
	Plac	Pic/Tot	Pic/Tot								Pace	PTS
												Factor
1	1	1/183	1/35	Lee Anderson	31	M	Endwell	NY	TCRC	0:48:39	5:13	1000
2	2	2/183	1/32	Tom Carter	36	M	Binghamton	NY	Syracuse Chgrs	0:48:39*	5:13	1000
3		3/183	1/31	Gary Fancher	27	M	Binghamton	NY	B&A Stevenson's	0:50:16	5:24	967
4	3	4/183	2/35	Bob Pulz	30	M	Johnson City	NY	TCRC	0:50:25	5:25	964
5		5/183	3/35	Dale Teed	32	M	Owego	NY	H.I.S.	0:50:56	5:28	955
..												
12	7	12/183	1/35	Reinhold Motawa	40	M	Ithaca	NY	FLRC	0:54:05	5:48	899
13		13/183	6/35	Alan Bowman	30	M	Ithaca	NY	High Noon A.C.	0:54:15	5:49	896
..												
26	18	26/183	1/22	Ed Stabler	59	M	N. Syracuse	NY	Syracuse Chgrs	0:57:00*	6:07	853
..												
45		1/28	1/11	Michelle Sierzant	21	F	Apalachin	NY	Ithaca College	0:59:22	6:22	819
46		45/183	10/32	Paul Oliver	35	M	Great Bend	PA	TCRC	0:59:51	6:25	812
..												
76		2/28	1/5	Carolyn Mather	40	F	Binghamton	NY	NYRRRC,ATC,WFYRC	1:04:19*	6:54	756
77		3/28	1/3	Margret Betz	52	F	Conklin	NY	TCRC	1:04:28*	6:55	754
..												
153		140/183	1/7	Ed Hart	61	M	Ithaca	NY	FLRC	1:13:56	7:56	658
..												
178	39	162/183	2/7	Bill Schweizer	66	M	Owego	NY	Syracuse Chgrs	1:19:09*	8:30	614
..												
210		183/183	1/1	Nick Ruggieri	73	M	Endwell	NY	TCRC	1:39:07*	10:38	490

* Under TACSTATS Age-Group guideline

Course Record: 0:46:15 by Tom Carter in 1982

Can you believe it? I never put this much information in printed results for one race but everything here is an item that a runner has asked for at one time or

another. The first column is overall place, of course. The second column is the place for team scoring using cross-country scoring rules. These rules are

that you: (1) eliminate non-team members, (2) eliminate people on a team which has less than five finishers, (3) eliminate any finisher beyond 7th for that team, (4) add up the places, and (5) low team wins. (For some reason TAC men cross-country races are not scored this way anymore. They just score based on time. The women use displaced place as described above. Does anyone know why the change?) Well, I digress. The third column is the place within the sex of the runner. For example, Tom Carter is the first of 183 males who finished the race and Michelle Sierzant is the first of 28 females who finished the race. The next column is the same type of information but shows the place within the age-group for that sex and the total number of finishers in the age-group. Following that are the name, age, sex, city, state, and club. Oh yes, the time is next. It's almost lost among all the other data. Notice that there is an asterick next to some of the times. These are times that are better than the TACSTATS guidelines which were published in the May/December 1988 issue of TACTIMES. Then there's the time per mile (with apologies to Bob Baumel) and a column called POINTS. The points are

computed by taking each finisher's time and dividing it into the winning time and multiplying the result by 1000. We use these points in awarding prizes in our Grand Prix competition which covers five races throughout the year. Prizes are based on the best four races. We used to award prizes just based on total time but this gave too much emphasis to the longer races.

The last column, Performance Factor, is based on the famous Pete Riegel formula. I lobbied our club to use Pete's computation for the Grand Prix award but my fellow club members just didn't seem to trust a formula. They understand dividing a time into the winner's time. At the bottom of the first page of both overall and female results, we print out if the course record has been broken and what the old record was.

Whew! Now that we've taken care of overall results, of course the meet director and the runners want results for each age group, for female finishers, and team results. In the age-group results it's nice to have overall place as well as place within the age-group:

FEMALE AGE GROUP: 29 AND UNDER

PLACE	O'All	NAME	AGE	TOWN	ST TIME	PACE
1	45	Michelle Sierzant	21	Apalachin	NY 0:59:22	6:22
2	111	Nancy Quaranta	29	Binghamton	NY 1:07:34	7:15
3	113	Karen Koscianski	26	Endicott	NY 1:08:04	7:18
4	117	Linda Bates	18	Binghamton	NY 1:08:29	7:21
5	127	Marsha Jochen	27	Johnson City	NY 1:10:18	7:33
6	131	Terri Hush	24	Binghamton	NY 1:10:53	7:36
7	146	Laurie Hoyt	23	Aurora	NY 1:12:32	7:47
8	177	Jo-Ann Giunta	26	Binghamton	NY 1:18:55	8:28
9	182	Anne Gilroy	29	Greene	NY 1:20:24	8:38
10	193	Debra Harden	28	Windsor	NY 1:24:49	9:06
11	206	Lucia Pekera	23	Binghamton	NY 1:31:55	9:52

STATISTICAL TRIVIA

Did you know that if you assign competition numbers randomly from one to N where N is the number of runners in your race and if everyone finishes, on the average ONE person will have a finish place which is identical to their bib number? This result does not depend on the size of N. You can have one person in your race or 10,000.

USING A CALCULATOR FOR MEASURING RACE COURSES

In 1983 Tom Knight sent me a copy of a document he got from NRDC. The document was an 8 page article containing instructions on how to rig up a hand calculator as a bike odometer. Its author, Mike McClendon, has used his device to measure several courses, although none for certification.

Basically, you solder a couple of thin wires across the terminals of the "=" key in the calculator and run the wires to a cam-operated limit switch mounted on your front fork. Each time the wheel rotates once, the "=" key is actuated, and one more rotation is added to the display. Because the calculator is otherwise unaltered, you can calibrate it and use its functions to make it display actual distances as you ride along.

It has drawbacks, in that it records only whole revolutions of the wheel, instead of 1/20ths as with a Jones Counter. Also, rolling backwards will add counts instead of subtracting them. But it looks like fun for those who like to tinker.

Note: Mike's description of the certification process is a bit off, but his description of how to make the device is right on. If you want a copy of the article, send a 9x12 stamped, self-addressed envelope to Pete Riegel.

Disley's way marks the thin blue line to runaway success

IT IS Thursday night. All day long London has been chock-full, bumper to bumper from the effects of a tube strike. Now the streets are quiet and empty. It is not warm, a chill northerly wind ensures that, but, most importantly, the roads are dry. For John Disley, they have to be.

Down Poplar, Limehouse, Wapping and Westminster with a cumbersome machine as his companion he is spending his Thursday night painting a blue line around the streets of London. If the gods are watching, they must know we are mad.

But the purpose of the line is disarmingly simple; for those quick enough to lead today's ADT London Marathon it is their eyes, guiding them to the shortest path, steering them from unseen hazards around the next corner. For 24,000 runners it will probably mean nothing, for a hundred or so it will mean vital seconds.

It is fitting that the task of painting the line is done at night and done by Disley. He is a man inclined, if not to darkness, at least to shadows. One might have expected a higher profile for the co-founder and course director of the London race and the most esteemed marathon measurer in the world. Christopher Brasher is the public face of the London Marathon; John Disley is the private face.

He was born 60 years ago in the tiny North Wales village of Corris, the only child of a slate miner. When he was six the family moved temporarily to London, where his father sold the end products of the slate industry, fireplaces, mantel shelves and clocks, until war broke out, the industry declined and they moved back to Wales.

PETER NICHOLS profiles a 'nearly man' of the track who found his chosen path with the London Marathon

They settled in Oswestry and the young Disley began running. 'Looking back, I had a lifestyle very similar to the Kenyans nowadays. The buses were so infrequent that everywhere I wanted to go I ran. Every day I'd run the three-and-a-half miles to school and back.'

It got him fit enough for the sport he really loved, football, and he was offered junior terms with Wrexham. His father said no. 'He was right,' admitted Disley. He also had a trial with Glamorgan cricket club, but didn't like South Wales. 'I found it alien.' And finally, at Loughborough College, he took up running seriously.

Disley was good. In 1952 he won the Olympic bronze medal in the 3,000 metres steeplechase at Helsinki, in 1955 he was comfortably the best in the world at his event. 'If Baron de Coubertin had had his bright idea a year earlier I'd have been the Olympic champion'. But he did not and he was not. In 1956, after a bout of viral pneumonia, he managed only sixth in the Olympic final that Brasher won.

He missed out in other ways. Among the top dozen climbers in Britain, he had trained with the Everest team prior to their departure in 1953. Disley had not expected their success. 'I misjudged it, I didn't think they would do it in '53, but would go back a year or two later, when I would have been able to get in some more alpine experience.'

Disley still has a cottage in North Wales and a romantic feel for the mountains. 'There is great satisfaction in having your destiny in your own fingertips. A day on a rock climb is all about your judgment in being alive at the end of it.'

When the challenges of international running and climbing faded in the early Sixties, Disley found other outlets. In 1964 he introduced orienteering into Britain, comparing it eulogistically to running. 'Running's a beautiful sport, but it's deadly dull. I mean as long as you don't use the left leg twice in succession, there's nothing that can go wrong.'

He joined the original Sports Council, too, rose to vice chairman, had a couple of years on the Gambling Commission as well, and came away with a CBE.

Then came the London Marathon. The idea he attributes to Brasher, but together they formulated the genesis. In 1979 and 1980, they ran New York. 'It was one of the best things I'd ever done, beats running round the track into a cocked hat.' Disley even collected a cup for the second fastest in the over-50 group when he ran 2hr 45sec. London was inaugurated a year later.

Nine years on and Disley has retained his enthusiasm for the race. 'What I like about the marathon is the number of people that you never would believe would run a marathon who come and tell you what a wonderful day they've had.'

Unlike Brasher, Disley has never run London himself and is unlikely to now, having had one hip joint replaced and the other to be done, 'when I get the courage'. Always an active man, Disley does not like the idea of

his own debilitation, even temporarily. 'I started medicine once, at King's College, but after a year I decided that I didn't like sick people. I'm unsympathetic. When I'm ill I go into a corner till I'm better. I'm ashamed I think. I don't think I will grow old gracefully, either. I wouldn't go gently into the good night.'

Despite the sporting achievements and the near-achievements, plus a vastly successful business partnership with Brasher at Reebok, he remains the most unaffected of men. Behind the gentle stoop of a man who has probably run up too many mountains there is a mildly cynical view of the world.

Like the wise country boy he is, he gives the impression that he does not expect much from us city slickers and is thus seldom disappointed. The important thing is not what others do, but what you do yourself.

'I think that you have to have a cause to be a complete person otherwise you just float along. My cause? To come out of the mountains and do rather better than anyone expected. Yes, I think I've done that. I think my Welsh aunts and uncles are astonished. How did young John Ivan end up with a CBE and go to Buckingham Palace? Though, of course, there aren't too many of the aunts and uncles left.'

JOHN DISLEY TO BE AT RRCA CONVENTION

The annual convention of the Road Runners Club of America will be held in Colorado Springs, CO, June 8 - June 11, 1989. John Disley, co-director of the London Marathon, will be there and will speak of his experiences. Pete and Joan Riegel will also be there. For convention information, contact:

RRCA National Convention
Triple Crown of Running
PO Box 38235
Colorado Springs, CO 80937

telephone: 719-473-2625

April 7, 1989

Bob Edwards
493 Dale Dr.
Erie, Pa 16511

Pete Riegel
3354 Kirkham Rd.
Columbus, Oh 43221

Pete,

By now you have probably seen the advertisement in the 1989 Rainbow Racing Systems catalog for the new race timer called the Time Machine. The price listed is \$450, which is unbelievable for a timer with those kind of features. I have talked with the designer of the Time Machine, and have decided to become a distributor, however, I am more interested in saving money on buying a unit for myself than on making money selling them. Therefore, if any reader of Measurement News is interested in buying one, I will sell them one at my cost of \$396 plus shipping. They can write to me at the above address, or call at 814-899-6461. If there is enough response to move me into a lower cost bracket, I will pass on the savings. I would appreciate if you could let your readers know about this price. Thank-you.



Bob Edwards

NATIONAL MASTERS NEWS

The official world and U.S. publication for Masters track & field, long distance running and race walking.

AGE-GRADED TABLES AVAILABLE

Age-graded tables for masters and open runners are now available.

Compiled by the National Masters News and the World Association of Veteran Athletes (WAVA), the tables can be used to:

- 1) Keep track of your progress over the years.
- 2) Compare your own performance to a different event.
- 3) Compare performances of different individuals in the same or different events.
- 4) Estimate your time in new events.
- 5) Set goals for the future.
- 6) Select the best performances in a race among all age groups.
- 7) Make awards more meaningful.
- 8) Give recognition to good performances in the upper age groups.

For a six-page guide on how to conduct a race using age-grading, send an SASE to the National Masters News, P.O. Box 2372, Van Nuys CA 91404.

NMN has also prepared a 30-page guide on how to use the tables to chart your own personal progress; and a 60-page "director's kit" on how to conduct a race, racewalk, or track & field meet -- with single-age standards and factors, detailed explanation, sample races, and personal performance examples and charts. To get the 30-page personal guide, send \$5 to cover printing and postage to NMN. For the 60-page director's kit, send \$7.50.



March 23, 1989
Peter and Joan Riegel
Chairman and Course Registrar
RRTC

Dear Riegels:

I enjoyed listening to Peter's tape last weekend. I think only one person used the whole three minutes and he really had to work at it.

Judith enjoyed the quilting article. She quilts with the intensity of someone training for the Olympic marathon.

About Guido Brothers Escort Service. For reasons I dare not ask, this is the name Gianni Ficarra and Peter Volkmar use for their course measuring company. Bert Meyer is the Lake Waramaug race contact. I suppose you could put "Guido Bros." in the measurer column.

Peter, even if you're old and fat (as you claim to be), you can still do Lake Waramaug; you just have to go slower than you would otherwise.

You mentioned that you might support allowing courses with a separation of up to 50% to be kept out of the "aided" category. I can't claim any expertise, but doesn't this make sense since, given a constant wind, you don't get back, running with the wind, as much as you lose running into the same wind? I'd guess you know the math and physics involved. I don't. How about 1m per km drop and 50% separation as the maximums for a course to be labelled "non-aided"?

Sincerely yours,

David Reik

David Reik
930 W. Blvd.
Hartford, CT 06105
(203) 236-9160

SEE CT LIST OF NEW COURSES.

(DAVID'S ANSWERING MACHINE GIVES THE CALLER THREE MINUTES. IN CALLING WITH A QUESTION ABOUT GUIDO BROTHERS ESCORT SERVICE I TRIED TO FILL THE 3 MINUTES, BUT FAILED.)

Dear Pete,

I enjoyed your letter that you wrote to me last month about teaching a class on course measurement and giving a brief biography on yourself. I hope that you make it to Australia; I was there almost 20 years ago - on R & R from Vietnam. I really loved Sydney and the people.

I haven't got around to planning a class yet - have been busy with other running things. But I will have or offer one sometime soon and your recommendations will be of great help.

(Typewriter ribbon just hit the wall.)

I have been busy getting our courses certified ; have done two in the last two weekends - a 5K and a 8K. We will do a mile one this Saturday, weather permitting. My goal is to have more certified courses in Montgomery than in any other city in Alabama. According to the State Record Book, Huntsville leads with nine. We have five here now, so I have to do at least five more and of course more after that as the need arises.

Pete, does TAC keep any kind of record to indicate a number of certified courses per capita or something per city? I would be interested to know which city has the most.

Thanks a lot for making my Tortoise & Hare map the map of the month. Let me tell you, however, that I did not draw that tortoise and that rabbit on the map - I had an artist friend do that part for me.

Would you please pass your thoughts along to me concerning the following issues and questions:

1. The allowable drop on loop courses is 2 meters per km; what is the allowable drop on point to point courses?
2. Can't a course retain its certification if the race name changes or you want to hold another race on it?
3. What is the limit on overall course adjustment to have the intermediate splits certified without going back to adjust them?
4. I have entertained the thought at times of trying to get a bill introduced in our State Legislature to make it a law that any race which requires an entry fee must have the course certified; I would give race directors at least one year from the effective date of the law to get their courses certified. This would not only make our sport cleaner but would encourage and mandate that more people learn course measurement for certification. I, of course, have serious doubts as to whether it would be worth the fight.

One more question: What address at TAC should I write to to get a book on rules of road racing?

About me, I'm a 42 year old governmental accountant; have been in this sport for three years ; am terribly injury prone; broke 40 minutes once in a 10K - that course was the first one that I certified - damn thing came up too short as it was for me to say honestly that I have broke the 40 minute barrier! I am also a correspondent for a running magazine that covers the Southeast - Running Journal.

Thanks a lot for taking the time to communicate with me. I find measuring to be a rewarding experience and a skill that is much needed in our sport. Take care and let me know if you are ever down this way.

Sincerely,



Bob Harrison
Montgomery Track and Running Club

THE ATHLETICS CONGRESS
OF THE USA

Road Running Technical Committee
Peter S. Riegel, Chairman

3354 Kirkham Road
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March 28, 1989

Bob Harrison - 3216 Herbert Dr - Montgomery, AL 36116

Dear Bob,

In response to your letter of the 23, I'm glad you were pleased at your selection for map of the month. Joan was responsible - she liked the bunny rabbit, and I thought the whole map quite pleasing and competently done. As for your questions:

- 1) There is presently no limit to drop on point-to-point courses. That's why the brouhaha is going on. Boston, with 3.3 m/km drop is in the same bucket with St George Marathon, with 19 m/km drop. Some people see that this is an inequity that needs rectification. Others think point-to-point records are all second-rate anyway, so why bother subdividing a category that's already subpar. Discussion is ongoing, as there are both political and technical arguments.
- 2) Courses are defined by their ID numbers. It is not necessary to recertify a course in order to hold a second race on the same course, even if the second race may have a different name or be done by a second organization. The various folks who paid to have the course laid out may argue with the interloper, but that is not something we presently consider an RRTC problem. We counsel the application of ordinary courtesy when this happens, and hope the organizers can settle things amicably.
- 3) If both measurements of a split show a distance in excess of the nominal, the split need not be adjusted. The split should be treated just as you would treat one end of a course. If it's a bit short, adjust it. If it's over, you can leave it alone.
- 4) I personally would oppose any effort by anybody to require that people certify their courses. We have made a lot of progress in certification by being tolerant. I'd let the pressure come upward from the runners. If they want certification, they will ultimately be heard. If they don't want it we are wasting our time.

The only thing that riles me is when the race promotion advertises certification when it does not exist. That's lying, and I'm not in favor of that. The runners deserve better.

5) Yes, indeed, the course list can be sorted by city. Here is a printout for Alabama. I wish you luck in catching Huntsville and Birmingham.

6) Rules for road racing are found in 1989-1990 Competition Rules for Athletics, available for \$8.00 from TAC - Book Order Dept - PO Box 120 - Indianapolis, IN 46206.

Thanks for writing.



Road Race Courses For Competitive Race Walking

By Wayne B. Nicoll

Race Walks held on the road have some course characteristics that set them apart from the road courses that are used for road running. Here are my thoughts on how to design, measure, and set up these courses for the enhancement of performances and improvement of the record capturing process. I have prepared this article for Measurement News, the publication of the TAC/USA Road Running Technical Committee (RRTC), and for the TAC/USA Race Walk Newsletter, the official organ of the Race Walk Committee. Some of the technical procedures described may be a little difficult for RW Newsletter readers to understand, but I can assure them that the techniques recommended are in their best interest.

The Race Walk Committee prefers that the courses be loops expressed in kilometer distances that are of a length that multiplies to other standard kilometer distances. The most popular configuration is the 2500 meter loop which multiplies out easily to 5000 meters, 10,000 meters, and the other Championship distances officially recognized by TAC/USA and IAAF. Occasionally other loop distances, such as 1250 meters and 5000 meters, are used. Recently one of our certifiers found that he could meet the loop needs of a race walk director by creating a 1666.67 meter loop, which is one third of 5000 meters. Mile marks are rarely used in race walks on the road.

The TAC/USA rules require that the race walk course be free of all vehicular traffic, thus many courses are planned for parks with bike and pedestrian paths and other areas where motor vehicles can be re-routed. It is quite common to see race walk loops on a section of boulevard that is temporarily closed to traffic. At Niagara Falls the 2500 meter loop designed for the 10K National Championship is held on a section of lightly traveled boulevard and has a special walkway cut through the median at one end of the 1250 meter stretch. It is not always possible to get a course to fit neatly between two existing median breaks so some modification of the course is usually necessary by creating a "bulge", or a turnaround on a side street, with barriers or cones.

There is considerable difference of opinion among walkers on the configuration of a turnaround. Some are happy to turn at a single cone point but others want a coned arc to proceed around. When measuring an arc be careful to leave sufficient room on either side of the cone pattern for at least two walkers to walk abreast. That need for walking space may significantly limit the size of the turnaround arc. My general procedure on laying an arc is as follows. I calculate and measure to a turnaround point. After I am satisfied with my two rides, I lay an arc from the turn point, allowing sufficient walking space on either side of the arc. I calculate the extra distance the walkers will travel around the arc, including an extra 30

centimeters of arc radius which constitutes the athlete's path outside the cones. I shorten the original turn point by half of the path length and re-lay the arc. I double check my layout by rolling my calibrated bike around the turn on the walkers path and along the distance from the old turn point to the new radial point. I mark the cone points as permanently as possible so they can be located in the future. The cones should be placed directly over the cone points if they can be located. If there are no marked cone points on the arc, it is simple enough to re-create the arc if the arc dimensions are shown on the course map. The key information that must be documented is the exact location of the radial point from which the arc is swung, and the radius length.

There may be other cone placements that restrict the walkers to a particular lane. This is often necessary if the walkers could easily cross into opposing lanes and shorten the distance traveled. If the course is narrow and there is two way walker traffic, there may be a need for extensive coning to separate the traffic. Watch for end cone points that should have their exact locations recorded so the course can be replicated in the future. The race director must be aware that his course certification is worthless unless the course map specifications are exactly met in the present and future events.

The race walk loop should not have any sharp rises or drops in elevation. It is difficult for walkers to maintain proper form on steep slopes. Unpaved surfaces, cobblestones, and the need to step up or down from curbs should be avoided. Try to design the course so that the start/finish area is along a straight section of the course so the race starts and finishes on a straightaway. The walkers should not have to negotiate a turnaround while starting or finishing. At the Atlanta 2500 meter loop used for the 1989 50K Championships, the start/finish was on one end of the out/back loop. To avoid an immediate turn, the distance from the start/finish to the turn, around the turn, and back to the start/finish was determined and that distance was laid out in a straight line from the start/finish to a new start point off the loop, giving the walkers a straight start and eliminating a requirement to make the turn when finishing.

Finally, if the race staff has properly documented the performances of the walkers in the event, and there are pending national open or age group records, it may be necessary to have an expert measurer verify the length of the race day loop. This is called a validation. There are always video cameras at race walks because of the intense interest in walking styles and legality. The race director should insure that one of those cameras sweep over the entire road surface of the loop during the race, with special attention to the start/finish, turnaround areas, and other coned sections that restrict the walker. A review of this videotape will make the validator's job much easier. In fact, if he has previously measured the course, he may not need to re-measure the course after viewing the videotape.

Hopefully measurers and certifiers can be of greater assistance to race walk directors in the design and management of their courses.

2ND CHANCE FOR LIFE 5K

NOTE: Start, finish and splits marked with nail and bottle cap.

START: On SW 3rd in line with power pole and west chain link fence of tennis court.

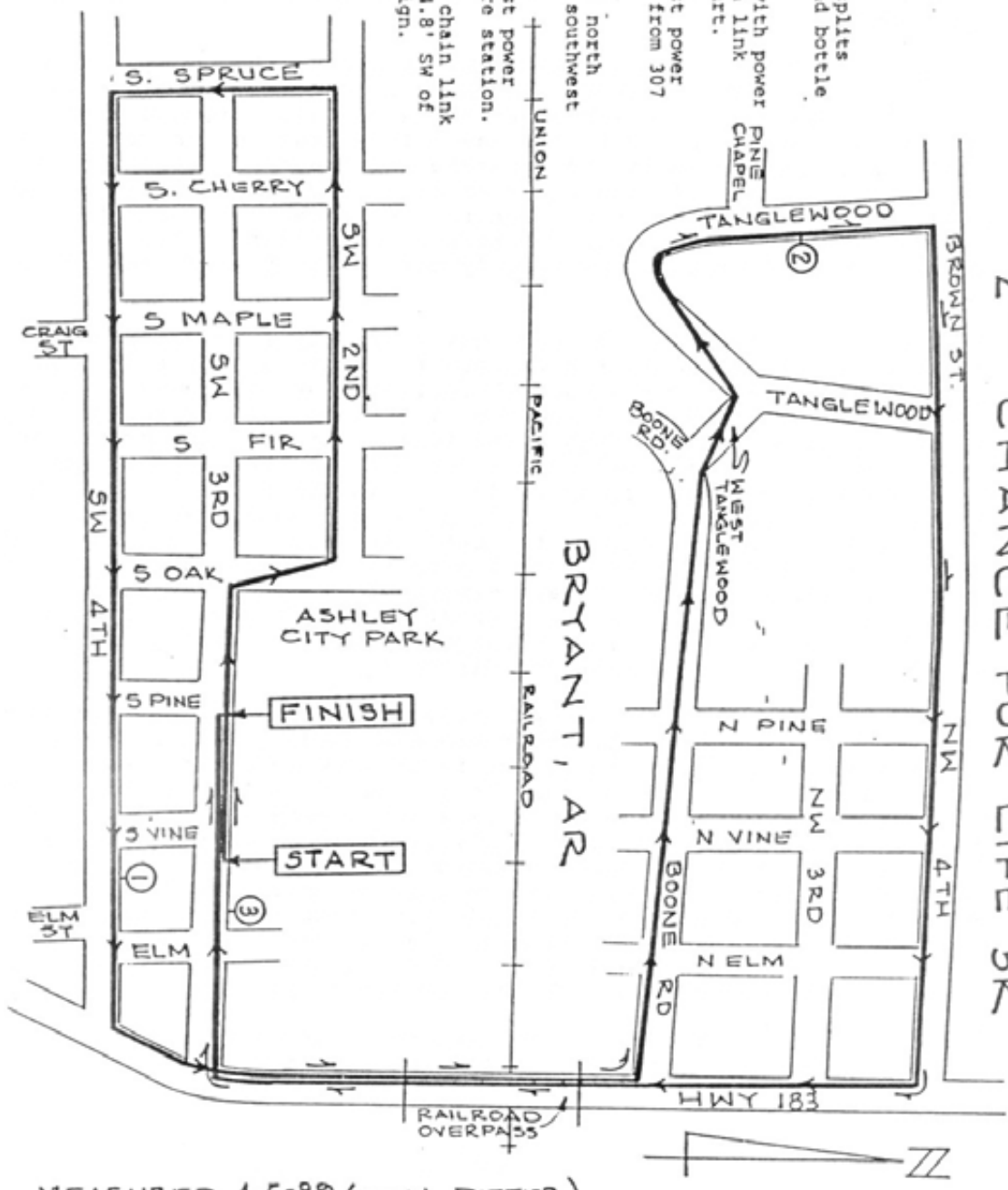
MILE 1: On SW 4th 17.1' west power pole across street from 307 SW 4th.

MILE 2: On Tanglewood 22.6' north power pole located southwest #7 Tanglewood.

MILE 3: On SW 3rd 27.6' west power pole located SW fire station.

FINISH: On SW 3rd 32.5' SE chain link fence corner and 44.8' SW of Ashley Park wood sign.

MAP OF THE MONTH



MEASURED 4-6-89 (DON L. POTTER)

A BASIS FOR AGE GROUP AWARDS

Let's put on a hypothetical 5 km road race for men only. We'll pay expenses for all entrants, plus a \$1,000,000 honorarium for coming, plus generous prizes to encourage maximum effort. Thus we may expect just about every single US male runner to show up ready to race hard. We decide that prizes will be given to anyone who finishes within 10 percent of the record time in his age group. If it was a 100 meter race, this would be like awarding a prize to anyone who was beaten by 10 meters or less. This is a way of separating the elite runners from the also-rans.

If this had been done in 1987, and everyone came, here is how it would have broken down, according to the TACSTATS records for 1987 performances:

<u>Class</u>	<u>Group Record</u>	<u>Record +10%</u>	<u>1987 Elite</u>	
OPEN	13:32	14:53	93	Note: an elite runner is here defined as one who finishes within 10 percent of the record for his age group.
35-39	14:19	15:45	21	
40-44	14:47	16:16	16	
45-49	15:41	17:15	43	
50-54	15:58	17:34	18	
55-59	17: 8	18:51	26	
60-64	17: 0	18:42	4	
65-69	18:26	20:17	6	
70-74	20: 1	22: 1	3	
75-79	21:12	23:19	2	
80-84	25: 1	27:31	2	
85-89	40:26	44:29	1	

Example: In the 50-54 group, the record is 15:58. If we add 10 percent we get 17:34. In 1987, 18 men beat this time, earning the title "elite." Out of the hundred of thousands of men who ran a 5k in 1987, only 235 came within 10 percent of the record for their age group.

The above deals only with the population of elite runners, and the relative numbers may be different for the more ordinary runners. Still, it shows the difficulty of setting up an adequate prize structure for older runners. For a race with 235 runners, we might expect to see prizes go 5 deep in the younger groups. For proportional awards, the older groups would receive only one (or less?) prize per age group. If it was done this way, would complaints be justified? What's to be done in an age group with only two entrants, or one?