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Keeping track of technology

By Jeff Hollobaugh
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Sometimes it seems as if the quantification of performance is what the sport of track and field is all about. Fans see great jump shots in basketball, and thrilling runs in football, but only in track do we ask, "How high? How fast?"

No matter how spectacular the jump looks, for instance, we only care about it if it measures up. We award no points for style.

For the longest time, our sport made do with a stopwatch and a measuring tape. With continuing advances in technology, however, inevitable changes have come in the measurement department. Now we even have shoes that can tell us how we are doing.

Reebok is marketing a kids' running shoe that keeps track of how fast a kid runs, as well as how high and far a kid jumps. When the shoe's microprocessor senses improvement, it celebrates the achievement with a light and sound display (one of the songs, reportedly, is "Pomp and Circumstance"). A model of the Traxstar for adults will be released in the year 2001.

I can see it now: "Roland Fitzberger is suing the IAAF over its denial of his application to be recognized as the world record holder in the 100-meter dash. Fitzberger, a computer programmer in Tallahassee, ran a time of 9.70 in the event. His lawyer says the performance has been verified by Fitzberger's shoes 'beyond a shadow of a doubt.' Reebok officials confirm that they have examined the microchip in the shoe and have certified that it has not been tampered with."

OK, so maybe the magic shoe will not be the future of measurement in our sport. In many other ways, however, technology has revolutionized the way track and field measures up.

Timing will never be the same

For decades, Accutrak stood as the only viable resource in North America for fully automatic timing. Meet directors used phototimers from Accutrak if they wanted to be assured of accurate clockings of the running performances at their meets. The high price, however, stood in the way of widespread application of the technology beyond the major meets. Eventually, the camera might pay itself off, but the cost of the special film remained daunting.

Enter FinishLynx, a PC-based timing system developed by Doug DeAngelis and a group of MIT engineers in 1991. Bingo -- no film! That cut costs immediately. Plus, the system also could be linked to results software, so the times, determined immediately after the race, could be merged into a results file. Within a minute, final results could be printed out for the media or sent to a stadium screen or the Internet.

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Not surprisingly, Accutrak folded, and the only other major provider that remains markets a video-based timing system for the lower end of the market. The video system can be had for less than the cost of one of the most popular (and far less accurate) hand-timing systems.

Not only is automatic timing now nearly universal at the collegiate level and beyond, but it is becoming more and more expected at the high school level.

Who benefits?

Sure, the statisticians love having accurate times to play around with. Debates on how fast a hand-timed race really is are becoming a thing of the past. Remember Jesse Owens running a world-record 9.4 in the 100-yard dash while in high school? Years later, a reporter asked him what the difference was between that race and the 9.4 dashes he produced in college. "About six yards," came the answer.

The real benefit of auto-timing, though, goes to the athletes and their coaches. The sprints are so short that hand-timing simply isn't accurate enough to measure fine degrees of improvement. A sprint of 10.50 seconds might be clocked anywhere from 10.1 to 10.5, depending on the skill of the person holding the watch.

More accurate timing means that sprinters will be able to readily see whether they are making progress, rather than relying on the guesswork of inexact times.

And the wind?

Any track fan knows that the other big variable, especially in the speed events, is the wind. That 10.50 sprint might be a 10.25 or a 10.75, depending on which way the wind blows at the time. So any reliable measure loses its validity unless the wind speed is also gauged.

For the life of me, I can't understand why any coach would not want the wind speed measured in every competition. Yet there remains widespread distrust of the wind gauge at both the high school and college level. I think part of this stems from the fear that the dreaded "W" will be applied to the performances of their athletes.

According to the rules of the sport, any performance in the sprints or the horizontal jumps that is aided by a tailwind of more than two meters per second is considered wind-aided and not eligible for record consideration. The fact that this rule has been around since before most of today's coaches were born hasn't made the rule a popular one.

Yet without a wind gauge, how on earth can a coach of a sprinter or jumper accurately assess an athlete's performance? If I were coaching, I would want to have the gauge around not only for all the races, but for most of my timed workouts as well.

Cost used to be a big stumbling block in this department, but no longer. The old-style wind gauges are still selling for around $1,000, but now accurate, hand-held, digital gauges are available for a tenth of that. The cheaper variety is also legal for all track-and-field purposes.

Technology producing better training aids

I remember running track workouts and scratching my times on a sweaty piece of paper that I would put into my sock for the run home. (I preferred pencil, as the writing wouldn't disappear if my socks got wet).

Today's stopwatches have ended those days. Their ability to store data enables runners to much more easily keep track of their workouts. In many cases, they can download the data directly to their computers so it can be imported into their training software programs.

For years, doctors have talked about the importance of targeting ideal heart-rate

ranges for workouts. Many distance runners now rely on portable heart monitors to provide them with instantaneous feedback on how hard they are running. These are the runners you hear beeping as they circle the high school track on a warm summer's night.

As a stat geek who is perhaps beyond rehabilitation, I must say that I am more thankful than most for the new technologies. I rejoice over the fact that high school athletes can now be timed with the same accuracy as Olympic gold-medal winners.

Yet with my own competitive days behind me, I must admit that for my modest little runs around the park near my daughter's elementary school, I like to leave technology behind. You won't hear my watch beeping as I approach you. Likely I will have left it at home.

You won't hear my computerized shoes playing "Pomp and Circumstance" when I hit a new top speed. If it's a warm day, I'll be the guy running barefoot in the grass. For all the utility of technology, sometimes the only way to go is low-tech.

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