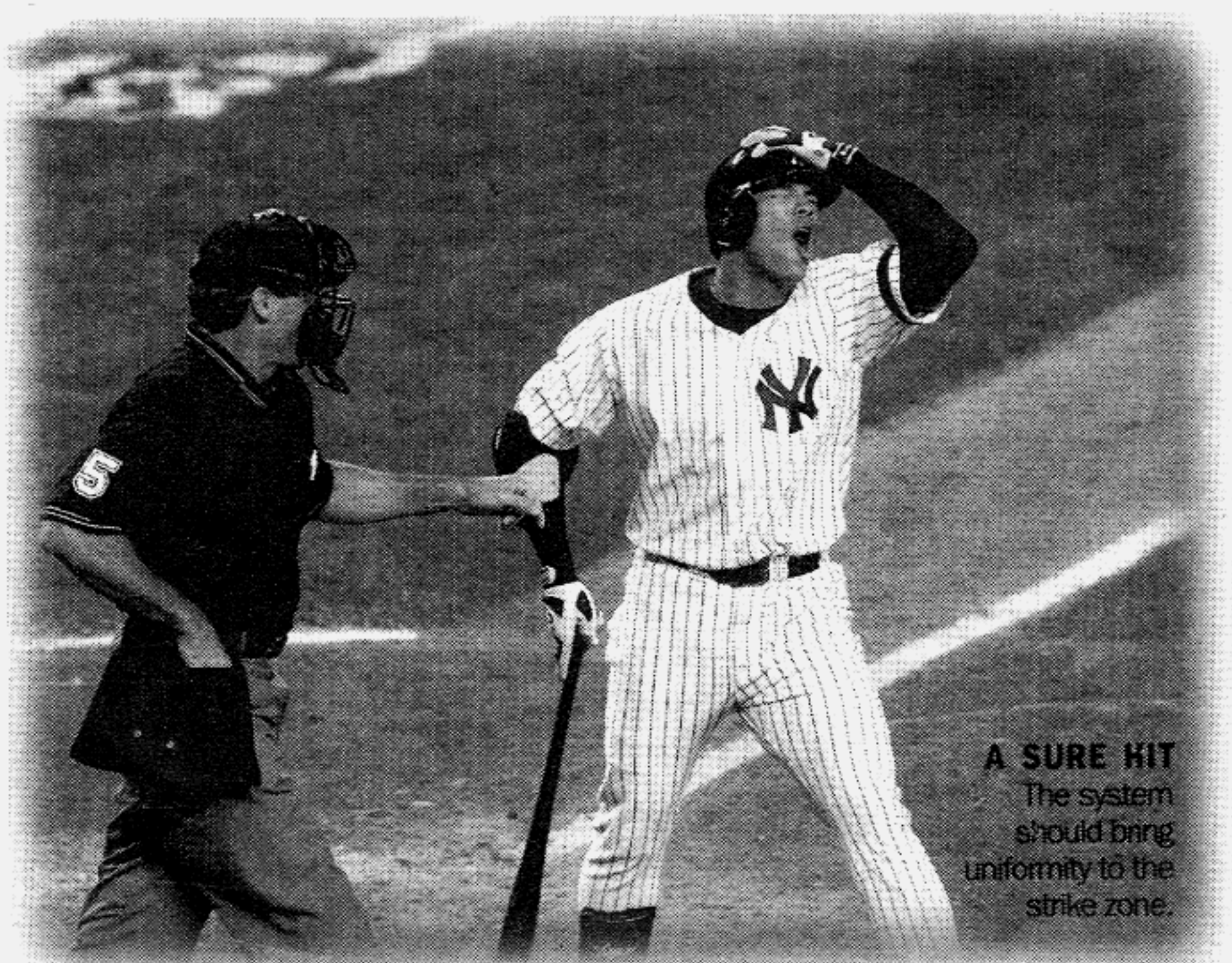


A better STRIKE ZONE

Umpires go high-tech to review their performance

BY MICHELLE MEGNA



A SURE HIT
The system should bring uniformity to the strike zone.

ANDREW SAVULICH DAILY NEWS

Umpires in Major League Baseball are sporting new equipment this season — laptops.

To help the umps enforce a uniform strike zone, as defined in the MLB rule book, league officials have hired an upstate firm to equip stadiums with a high-tech ball-tracking system. The gear will help umpires evaluate their performance by letting them review their calls on a laptop.

The Umpire Information System was developed by QuesTec Inc. and is based on technology first used by the military to track missiles and conduct aerial mapping.

"MLB came to us because they were looking for consistency in the officiating process, and they needed objective feedback on the umpires," said Edward Plumacher, founder and executive producer of QuesTec. "They equipped umpires with new laptops as part of the process."

The ball-tracking component uses cameras mounted off the first and third-base lines, just beyond the dugouts, and two other cameras mounted atop the stadium.

The cameras follow the ball from the time it leaves the pitcher's hand until it crosses the plate. The information is interpreted by a computer program, which produces a three-dimensional view that shows the ball's speed, trajectory and relationship to home plate. The data are stored on a CD-ROM, which umpires are required to watch on the laptops after the game.

"What's unique about the technology is that we're not just putting up a bunch of video cameras in the park

and taping it. You could put 15 cameras in and not get the right perspective. Our system tracks the ball's flight and positions it in space in 3-D so it's accurate and objective," said Plumacher.

QuesTec is in the first year of a five-year contract, Plumacher said, and should have six stadiums equipped by the All-Star break. The system has not been installed in New York yet, although one of the city's stadiums is slated to be equipped this season.

MLB officials decided to use the Umpire Information System because they believed umps were calling strikes and balls based on different definitions of the strike zone.

According to a report at www.mlb.com, the rules define the zone as "the area over home plate, the upper limit of which is a horizontal line at the midpoint between the top of the shoulders and the top of the uniform pants, and the lower level is a line at the hollow beneath the knee cap. The Strike Zone shall be determined from the batter's stance as the batter is prepared to swing at a pitched ball."

For years, baseball observers say, the strike zone had been getting lower and wider, with umpires ignoring the official definition, which had not changed for more than a century.

So what's the call by umpires on the new system? "Reactions are as diverse as the individual personalities," said Plumacher. "Some embrace it, while others find it

a nuisance. This is an institution over 100 years old and they've never had anything like this before, so people are skeptical at first. But once they see it in action, the majority of the umpires enjoy getting the feedback."

All the data collected are confidential — they will not be used for instant replays on television or released to the press, say commissioners. Plumacher said that the system will not be used to replace umpires or to second-guess calls on individual pitches, but rather to help umpires focus on and improve troublesome patterns, such as a tendency to call outside pitches strikes.

STRIKEOUTS ARE UP, ERAS DOWN

The system was tested for the first time in a game between the Boston Red Sox and the Baltimore Orioles at Fenway Park. C.B. Bucknor, home-plate umpire at the April 10 game, told Michael Vega of the Boston Globe, "I'm willing to do anything that is going to make me a better umpire. If it's for the umpires to use to their advantage and help them become a better umpire, then I don't see a problem with it, provided it's used in a positive way."

Mike Reilly, crew chief at the game, was also optimistic. "I think it definitely can help," he told reporters. "Let's say you're struggling with the outside pitch and now you go and review it, and you see that you did miss five or six pitches, maybe on the outside part of the plate. It helps you bring some concentration in that area and helps you be more precise."

"There's so many things out there, technologies that can improve things in all walks of life," said Reilly. "If this is a tool that can help in umpiring, then it can be good for us. I know it's supposed to be confidential and I know a lot of umpires fear that it might not be confidential, and that could hurt us, if broadcasters and people like that got ahold of it."

Baseball officials have put great emphasis on enforcing the official strike zone this year. A seminar for umpires was held during spring training, with the umps seeing a video called "Points of Emphasis" on the topic.

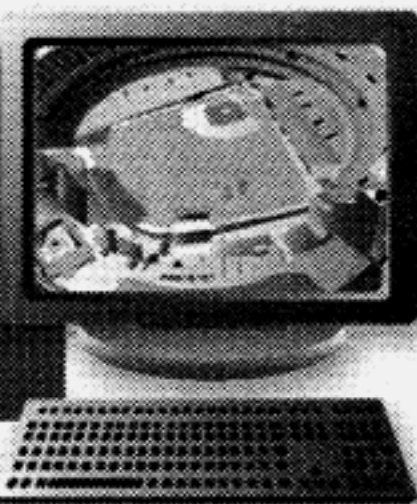
Among other things, according to www.mlb.com's Josh Sipkin, umpires were told at the meeting that they "should no longer call strikes that are off the plate or pitches that are perfectly framed by the catcher's mitt." The video said that "external forces, such as catcher's position, the pitcher's reputation or team/fan reaction, will not play any part in an umpire's call." In addition, it said, "Umpires cannot adjust their strike zone based on who's hitting or pitching."

It seems the plan is working. According to news reports on May 2, a month into the season, "strikeouts are up while walks, home runs, batting averages and ERAs are all down."

As for the hoopla over the Umpire Information System, Plumacher said, "Baseball is an institution built on tradition. When the governing body of the league decides to embrace technology, it gets attention." ♦

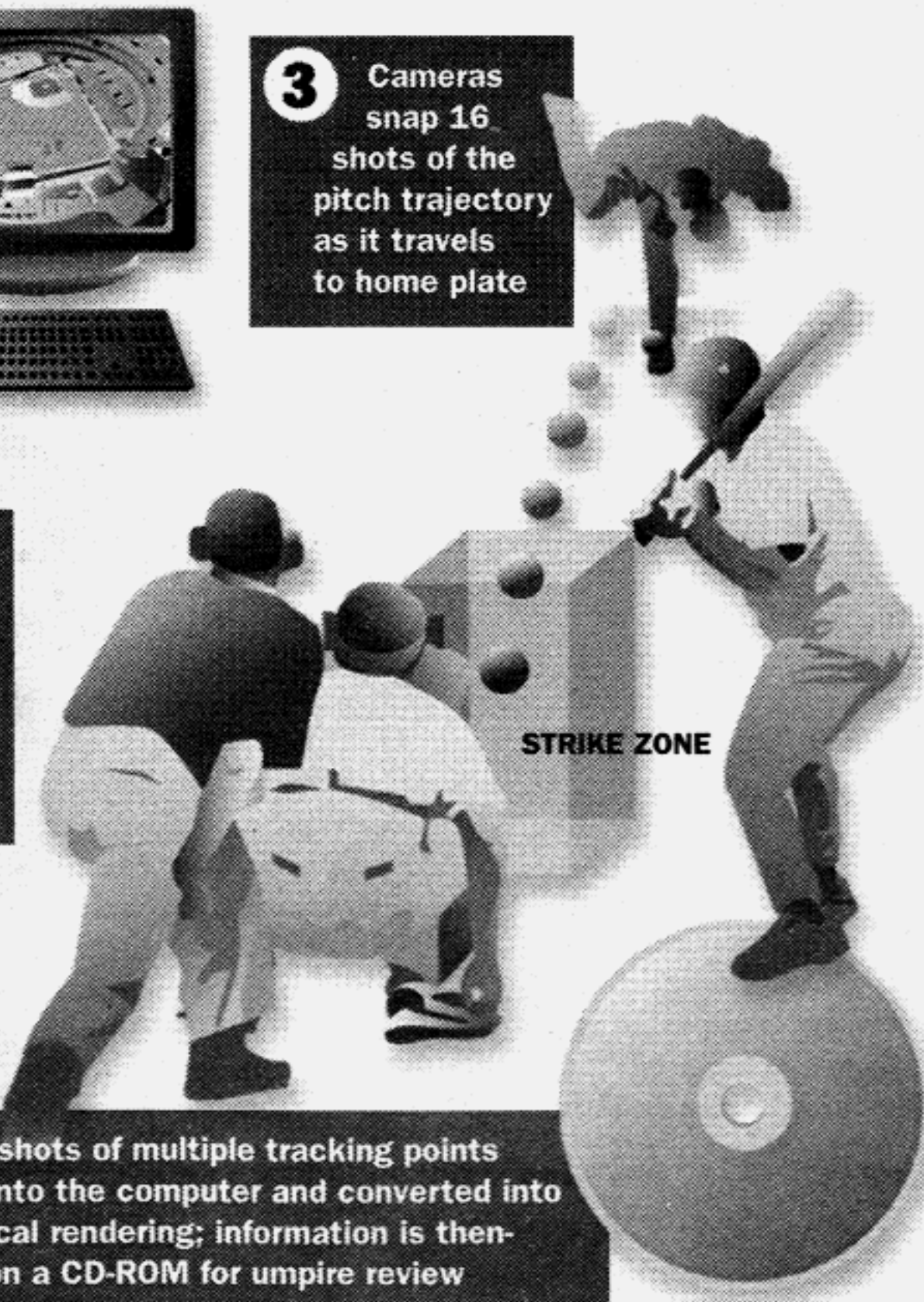
Mapping out the strike zone

1 Photo of field is scanned into a computer and rendered in 3-D



3 Cameras snap 16 shots of the pitch trajectory as it travels to home plate

2 Two cameras determine batter's strike zone while two others track the pitch



4 Camera shots of multiple tracking points are fed into the computer and converted into a graphical rendering; information is then burned on a CD-ROM for umpire review

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