

Flash!

Lightning tracking makes courses safer

BY VERN PUTNEY

Superintendents, who make the "Play, Stop and Resume" decisions when lightning storms threaten events at their golf courses, can put a call in to modern technology for help.

Since Lee Trevino's highly publicized brush with a lightning bolt during the 1975 Western Open at Butler National Golf Course in Oak Brook, Ill., the danger of lightning bolts has worried players.

When is discretion the better part of valor? When should the ball be picked up and reluctant players retreat to the clubhouse?

There was a time when stubborn golfers proceeded at their own risk. The focus has changed in the last decade, strongly influenced by Trevino's searing experience. Trevino came within an ace of losing his life, and playing companions were equally endangered.

In the form of R•Scan—a comprehensive satellite system for tracking and communicating cloud-to-ground lightning strokes—science and modern technology have come to the rescue, both for golfers and course operators.

With the advent of television and the big bucks it brought to tournaments, came the added need to know the weather in advance.

An early-warning system not only may save lives, but could reduce insurance costs and legal liability.

R•Scan Corp., based in Minneapolis, Minn., entered the golf scene dramatically. Its Lightning Data and Information Systems was first used during the 1985 U. S. Open at Oakland Hills Country Club in Birmingham, Mich.

The tournament proved an ideal testing ground. Opening day began pleasantly enough, but by afternoon thunderclouds



Lightning's a killer

Lightning, which strikes in the United States approximately 10 million times each year, carries with it some deadly numbers. Between 100 and 200 persons are killed by lightning each year. Hundreds more are injured.

Golfers are at high risk when hazardous weather approaches because they are on unsheltered land.

Contrary to popular belief, lightning isn't always found in a rainstorm.

It usually precedes heavy rains, or often travels along the fringe of larger storms, striking areas that receive no rainfall.

Some rules on lightning safety:

- If you plan to be outdoors, check the weather forecast. Look out for increasing winds, thunderclouds and lightning.
- If a thunderstorm occurs, get inside a building or car.

- If caught outside, go to a low place (valley, ravine, etc.) so you don't stand above the landscape.

Do not stand under a tall or isolated tree.

- If caught on level ground without shelter or if you feel your hair stand on end, drop to your knees and bend forward, placing your hands on your knees. Do not lie flat on the ground.

- Get off or away from open water, tractors or other metal farm equipment, or other small metal vehicles such as golf cars, motorcycles and bikes.

- Stay away from wire fences, clotheslines, metal pipes, rails—any conducting objects.

People struck by lightning carry no electrical charge and may be handled safely. In many cases, apparently "dead" victims have been revived by CPR.

caused some uneasiness.

"Not to worry," came word from R•Scan.

By Saturday, the horizon loomed especially dark and ominous. Storm clouds were gathering swiftly. Frank Thomas, USGA technical director, repeatedly contacted Dr. Kenneth Bauer, R•Scan's vice president of operations.

"Where's the lightning?" was his nervous inquiry.

"Not within 300 miles," was the continued assurance.

Rain poured down in abundance, but the show went on. Andy North slogged through a couple of uncomfortable days for the title

and, to the immense relief of presumably worried ABC, a bundle of money was saved through no cancellation of play.

Postponing tournament windup to Monday doesn't please sponsors or soap opera fans.

R•Scan monitored the weather during routine Minnesota golf events in 1986, and during the 1987 and 1988 U. S. Amateur tournaments.

Chris Hague, course superintendent at Hazeltine National Golf Course in Chaska, Minn., says he was "real pleased" with results.

"There was early delay in sounding the 'all clear' signal, but improved technology corrected that," notes Hague. "Forecasting probability of precipitation, tornadoes and lightning is a big help."

Implementing this service on a national basis is not far off, Bauer feels. R•Scan, now operational in a quarter of the country, should blanket the United States by the end of this year.

He notes that there are 200,000 to 300,000 cloud-to-ground strokes in a busy 24-hour period. His company logged 250 strokes per minute in one Iowa county, "which is a lot of electricity."

R•Scan is only advisory to the golf course superintendent, who usually wears an alphanumeric pager (beeper) on his hip pocket, and makes the final decision on play.

Science seems to have supplanted eyeball observation on the course.

As Bauer observed, "Everybody talks about the weather. While we can't control it, we see our product as a valuable tool to minimize its hazards."

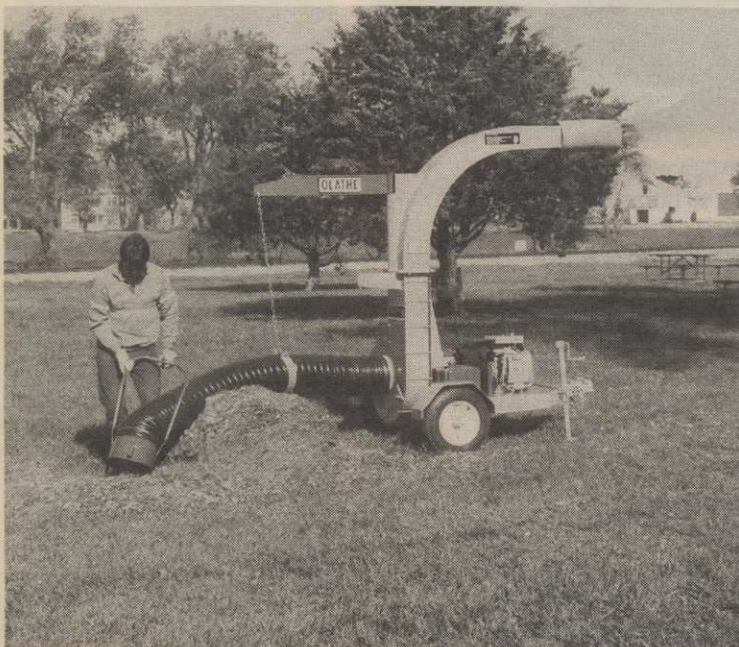
Alerting course management to fast-changing conditions can help warn against outages that could affect such things as office computers and irrigation controllers."

Trevino should rest easier now.

R•Scan Corp. offices are at Minnesota Supercomputer Center, 1200 Washington Ave., South Minneapolis, Minn. 55415-1258.

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