COMMENTARY April 22-95

Flying on the ground

■ Brainchild of 'amusement-park technology' is now an aviation standard.

In "Global Paradox" John Naisbitt wrote, "The first generally recognized application of 'virtual reality' was the so-called 'Link Trainer' for instrument flying." Naisbitt is speaking of training pilots on the ground in a flight simulator.

Nearby history

LOUISE PETTUS

In the 1920s, the usual fee for flying lessons was $25 an hour. Not many would-be pilots could afford that. The Link Trainer was patented by Edwin A. Link in 1929 to provide a cheaper means of instruction.

Link built his first trainer with parts from his father's organ factory. Not many used the Link flight simulator until the U.S. Army Air Corps in 1934 was assigned the task of transporting air mail. A large order for the trainers allowed Link to found Link Aviation Inc. in 1935.

Now, go back a few years to 1921. Capt. Elliott White Springs of Fort Mill, a World War I flying ace and, for a short time, a test pilot, had a hangar with three planes in a field beside the White Homestead, which he was remodeling.

Springs had an arrangement with a Rock Hill movie theater to pick up the latest films on Sunday night for showing at the Homestead. One night young Bob Bryant drove a motorcycle to deliver the movie to Springs. Bryant had wanted to fly all of his life and was entranced with Springs' flying record. Springs taught Bryant to fly, and Bryant taught him how to ride a motorcycle.

As Bryant sat on his haunches, Springs showed him how to maneuver a broomstick as if he were in a cockpit. Springs had him practice on the ground until his movements were automatic, and then took Bryant up in the air to practice landing maneuvers.

Fifteen years after Springs taught Bryant how to fly, Bryant set the first of two world records for the longest nonstop flights. In 1936 the distance was 700 miles; in 1938 Bryant flew 1,050 miles nonstop. In a 1973 interview Bryant said his first lessons were on the ground.

In the 1930s, Jack Partlow of Rock Hill ran an amusement park on Wilkinson Boulevard in Charlotte. Several years ago, Partlow told this writer that Elliott Springs frequently stopped at the park, not to ride the machines but to study how they worked. Several times Springs bought pieces of equipment and sometimes just spare parts.

Partlow thought that Springs took some of the parts to Johnny Crowell, a Charlotte stunt flier and mechanical genius. (Some of Crowell's inventions included the first automatic choke for automobiles in America, a calculating compass for aircraft that far surpassed anything up to that point, and a device that increased a camera's lens speed by 50%.)

Sometime in the late 1930s, Crowell and Springs put together a flight simulator that became known as the Crowell Train-Air (Springs never cared about having his name attached to inventions). In 1941 the Crowell-Train-Air, "a mechanism marvelously balanced by weights," was put on display in Rockefeller Center's Museum of Science and Industry in New York.

Back to John Naisbitt in "Global Paradox": "Developed from amusement-park technology, it (the flight simulator) was in wide use by the late 1930s and remained in use until the mid-1960s. . . . Today, simulators for airliners and business jets are sufficiently advanced to be primary means of training (of pilots)."

Was the original idea behind flight simulators that of Capt. Elliott White Springs of Fort Mill, and then Edwin Link thought of it (probably independently) a few years later? Or did Johnny Crowell think of it first (he was three years older than Springs) and Springs helped finance the invention? Remember, Naisbitt says the first flight trainer was based on amusement-park technology. . . .

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Guest Column