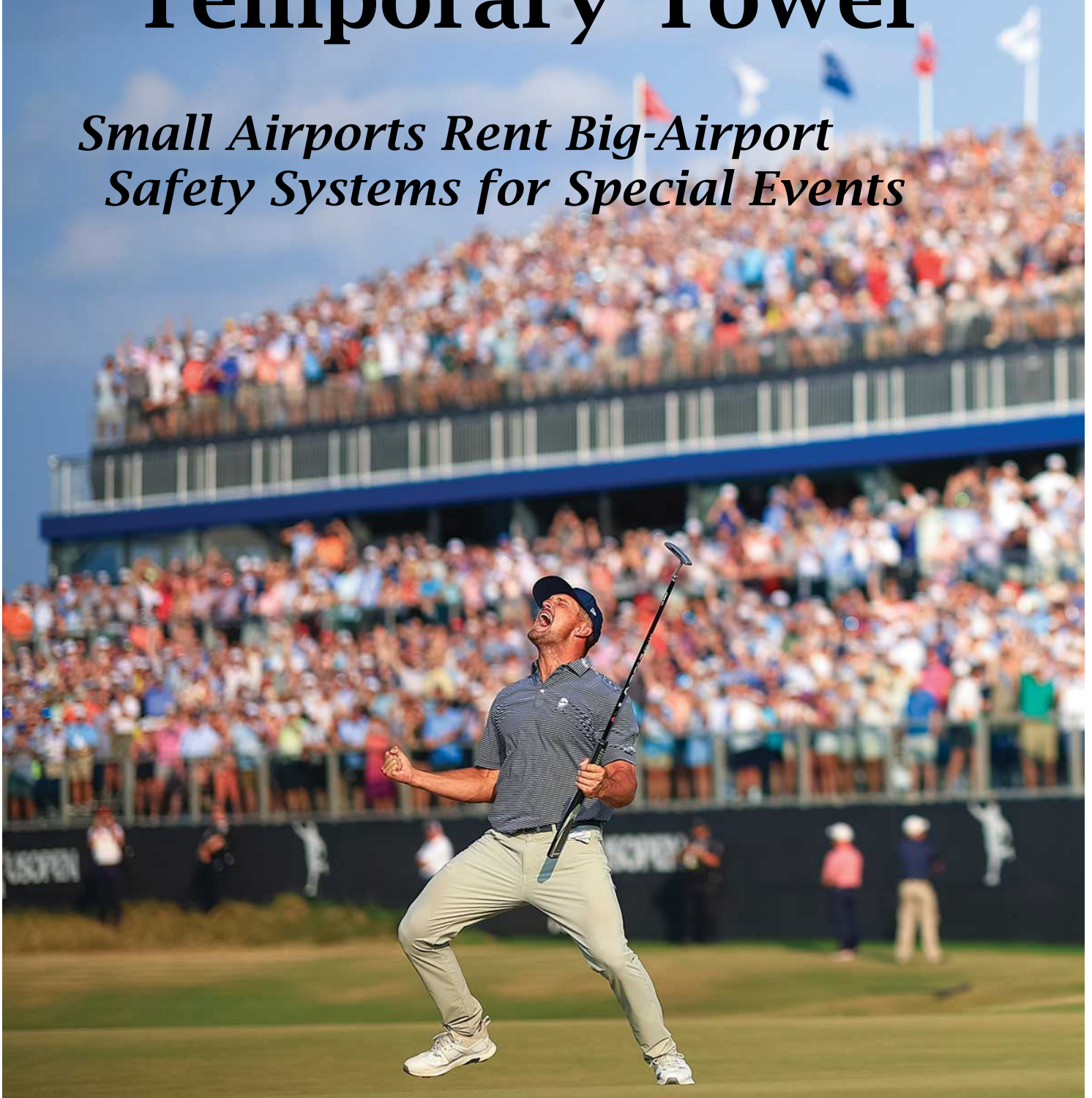


Surprise! You've Got a Temporary Tower

*Small Airports Rent Big-Airport
Safety Systems for Special Events*



Surprise! You've Got a Temporary Tower

By Mike Jones

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Fans of late-night television will recall old black-and-white Judy Garland movies from the 1930s in which some enormous economic crisis was solved by “putting on a show.” Putting on a show can shake loose more cash than a bake sale. Indeed, a successful show can put a town on the map. I’ve never been to Marion, North Carolina, but 40,000 people visit it every year for the “Bigfoot Festival” built around local sightings of Sasquatch. Roswell, New Mexico, hosts a “UFO Festival” which includes bands, acrobats, and a pub crawl with alien-themed cocktails. Mark your calendar!

Some shows are giants, like the Super Bowl and the Final Four; but there are lesser-known attractions which are gigantic, like the Sturgis motorcycle rally in South Dakota which attracts 500,000 riders every year. Big shows attract big money, which attract big airplanes. But these shows often are at semi-remote locations with limited runway capacity. Who are you going to call, aeronautically speaking, when your show goes viral?

You call George.

George Cline runs AirBoss, and for a modest fee he’ll sort out your heavy-metal conundrum. I met Cline at the Pinehurst airport in North Carolina (KSOP)

where his team was orchestrating the aerial dance for the 2024 U.S. Open, a golf tournament which attracted 220,000 visitors.

Twelve Years of Temporary

The primary product Airboss provides is a temporary, VFR-only, FAA-quality, air traffic control system. His team arrives with a portable tower towed behind a giant Ford F450 truck. Inside the tower are the people, phones, radios, and computers needed to seamlessly link into the air traffic control system. When the big-shots arrive in their Gulfstreams, Cline's team is there to answer the phone.



The parking ramp at the Pinehurst Airport (KSOP) was jammed during the open with jets and turboprops of all sizes and shapes. Preliminary numbers indicate this G.A. airport had more than 2,000 operations during the week of the Open.

“There’s only a couple of us in the whole world who do this kind of work,” Cline told me. “A guy named ‘Stretch’ Gall handles a lot of events out west, but we’re really the only game east of the Mississippi. There are a couple of other guys who do it, but they don’t have the radios, the tower, the equipment.”

The Masters Tournament is a good example of the Airboss operation. The main airport for the Masters is Augusta Regional Airport, which is about twelve

miles southeast of the golf course. It has a 24-hour, FAA-operated control tower. But Augusta Regional fills every parking space, despite the fact they're charge \$3,000 for a landing and \$16,000 a week to park an airplane. The overflow traffic spills into both Daniels Field (five miles south of the actual golf course) and Aiken, South Carolina (twenty miles east of the golf course). Those are the airport's where you'll find the Airboss team.

"Daniels has a shorter runway, about 4,000 feet, so we get the smaller Citations and such; it's tight, but at Aiken we can take anybody," Cline explained. "Aiken out-performed Daniels for arrivals and departures, because



George Cline shows of his one-of-a-kind mobile control tower, built on a frame similar to that which would be used for NASCAR racing teams or a large horse trailer. The system is towed behind a massive Ford F450 pick-up truck. The lower portion is an office and breakroom; the raised tower is on the right, and the open upper deck is used for airshow commentators.

they have a longer runway and an ILS. Planes were dropping off passengers at Augusta, flying to Aiken, and paying just \$300 a night to park."

Experience and Trust

Airboss is a small company, limited by the scarcity of highly-trained human resources. There are only about 14,000 air

traffic controllers in the U.S. and they are required by law to retire at age 55. At that point, many are burned-out and ready for a change of pace. Cline is able to persuade a few to join his merry band. As of today, the company has nine employees.

Cline's standards are high. "They've all got to be good controllers that we trust, all VFR tower guys with their CTO [Control Tower Operator] license, and a

Class II medical,” Cline said. “You can’t use enroute controllers for this job,” he added, dismissively.

Working the Open with Cline in June were David Short and Bobby Miller, both retired FAA controllers with long pedigrees in pushing tin (see sidebar). I asked Short if running a temporary tower is different from a permanent tower. He chuckled at my naivety.

“We work with only two people. At a normal airport, there will be five people up there. If you’re really busy, like running parallel [runway] operations, you’ll need two tower controllers, two ground controllers, one person doing



George Cline (black shirt) and his long-term colleague, David Short, scan the skies at the Pinehurst Airport during the 2024 U.S. Open.

clearance delivery, a data guy, a coordinator, and a supervisor. They’ll all be up there at the same time. Trying to do all that here with two people, it can get real busy.”

While these events are brief they are not spontaneous. Cline typically gets a contract for a job a couple years in advance. He then develops a “special letter of agreement” with the controlling air traffic facility describing the who, what, when and how the airplanes will be moved through the sky.

Cline uses two custom-made portable towers, built on rugged trailers. The smaller one is used for local functions, like the Clemson football games, while the bigger one is used for longer, more complex events.

“If you were to build one of these today, it would cost \$400,000 or more,” Cline estimates, with the generator, air conditioning, radios and computers. But the equipment doesn’t have to be elaborate. Cline works one event in Camden, SC, every year using a control tower on the back of a Humvee. “We’ve done events on the back of flatbed trailers. We got started with tents, chairs and a fold-out table,” he laughed.

Cline faces two big issues: employees and insurance. “We’re all aging out, and the travel is grueling. It’s hard to justify all the time away from home at our age,” Cline explained. Cline’s son, a supervisor at the [Charlotte, NC] tower, is preparing to take over the business when the time is right. As for finding more controllers, “We’ll get more FAA guys retiring. It’s extra money, they’ll be doing what they’re good at, and it’s fun.”

But insurance could squash the business. “Two years ago, my insurance ran around \$5,700 a year, including tower jobs and airshow work. Now its \$47,000. I hope I can pass that along to the client.”

The pace of work at the tower flitters from sleepy to flat-out. They crew doesn’t get an official “forecast” of the anticipated traffic from the FAA, but they are familiar with the flow typically generated by similar events. “We go to Foreflight and FlightAware, just like you do, and see what’s scheduled into the airport,” Miller explained. “Then we just get to work, helping whoever shows up.”



Bobby Miller is another long-time FAA tower controller who retired into the exact same job working for Airboss. He’s scanning the flight strips which advise the tower about departing and arriving flights. Miller sorts the strips in his preferred manner and places them on top of the black radio box awaiting calls from the pilots.

The tight staffing makes for long days. “Our hours are 7:30am to 7:30pm, and we stagger our shifts at different times. During slow periods we’ll take a break, stretch our legs, get something to eat, even take a nap. But normally we just work straight through,” Miller said. “Once the tournament is over, it’s gets really crazy.”

Primitive But Precise

In the simplified tower Airboss operates, there usually are two controllers. One works in the background on clearances and coordination while the other is the voice on the radio and is the actual controller. Both positions use temporary radio frequencies assigned by the FAA for that specific event. A third radio monitors the airport’s normal UNICOM frequency.



Between the two positions is a computer screen showing the local traffic, including incoming arrivals. I found it difficult to follow the computer traffic and visually spot arrivals because the fast-moving jets fly a wider pattern than

the piston-powered trainers usually found at Pinehurst. Miller concurred it can be tricky. “You’re looking at the end of the runway, which is a mile and a half away, and the plane in the air is three miles beyond that, so yeah, they’re hard to see.”

“There’s kind of an art to spotting them,” Short said. “We also get a lot of glare from the white walls in this tower. We’ve tried just about everything to get rid of the glare, but nothing quite works.”

Unlike a tower with actual radar, these controllers can’t use ADSB for separation. First, they’re only a VFR tower, so they don’t provide IFR separation; second, there is a pronounced latency in the ADSB display which degrades the accuracy of the positions on the screen; and third, many small planes don’t have ADSB and will not appear at all. So it’s all eyeballs, all the time.

Despite the years of experience and trust in each other’s skills, each controller monitors the other’s performance. Short worked the radio with a camera airplane floating over the golf tournament, ending with the instructions to “maintain 3,000 [feet].”

Cline questioned him on that command. “He’s flying VFR, so you can’t assign him an altitude.” Short thought about it for a moment and agreed, clicking the microphone and correcting himself. “Maintain VFR,” he told the pilot. “Advise any altitude changes.” The two men looked at each other, proud of their precision.



The ADSB system in the control tower is used for awareness but not for IFR control procedures. Notice the red circle denoting a TFR over the actual tournament. A Cessna 182 hired by the USGA circled over the tournament every day, taking photos.

Both controllers keep an eye on the flight data system. This is an old-style “green screen” text-only computer linked to the FAA. It spits out “flight data strips” advising them on each arrival and departure.

“If somebody filed a flight plan, we’ll normally have it ahead of time from this machine,” Miller explained. “If we don’t have it, like somebody’s leaving earlier than they expected, we can inquire into the system and pull the flight plan out.” Once Miller and Short have the flight data strip, it’s a simple task to read the clearance to the pilot and send them on their way.

As I watched, ExecJet 759 called for a clearance, but they were 45 minutes early so the flight strip hadn’t yet printed. Short tapped an inquiry into the computer (followed by the very familiar radio call, “Flight plan on request”) and a moment later the computer spit it out. Unsurprising to them, it was a time-consuming full route clearance.

“This is a special event, and the event NOTAM has all these new routes [to accommodate the extra traffic],” Short sighed. “He [the pilot of ExecJet 759] filed the normal route, but we need to make sure he had all these extra waypoints. They need every waypoint and they’ve got to be spelled right.”

Miller carefully sorted the flight strips on top of the radio. “I sort them by the lowest N-number to the highest N-number,” he said. “If I don’t get an N-number, like Dark Horse and ExecJet [flights], I put them in alphabetical order.” Short prefers to organize them from the bottom to the top. “We had an old guy who sorted them by beacon codes,” Short remembered. “Some people use arrival times, or departure times, but those change all the time.”

It seems remarkably primitive to be moving billions of dollars of aircraft using a flimsy piece of thermal paper; I was expecting something with a snappy graphical interface. I also asked what happens when things go wrong, such as when the weather turns bad or pilots use the wrong frequency.

Cline explained that his towers only operate under VFR rules. They don't own the airspace above the airport (in this case, a hunk of class E airspace). While they deliver IFR clearances to pilots they don't create them; Airboss is just a messenger working on behalf of the controlling authority, Fayetteville.



A typical flight strip for a departing flight, the "+" signs denoting it is a "full route" clearance.

Short explained that, in one sense, the weather doesn't make too much difference. "All these guys are on instrument flight plans," he said. "They just happen to be flying visual approaches. If the weather got worse they'd switch to ILS or RNAV approaches. But in the end, we still have to see them."

"We worked this Open in Pinehurst in 2014, ten years ago," Miller recalled. "We had a couple bad days when storms rolled through. That was interesting."

Short related another stormy event. "At Daniels Field a couple years ago, at Augusta, we had a microburst that ripped up the tower. We rushed in this portable tower. We sat on the ramp, working the planes," he said. "Weather roils things quite a bit."

As for the incoming traffic calling on the UNICOM frequency, it's such a common mistake that neither Short nor Miller fuss about it very much. "We don't think anybody purposely ignores the rules, they just missed the NOTAM," Short said. "It happens routinely. That's why we monitor the UNICOM frequency. We're watching."

Miller agrees. "Everywhere we go, it happens. It's just part of our life. We're here to help. We're not the UNICOM police, unless somebody gets belligerent. We just try to educate them and move on."

Short laughed in agreement. "We don't bitch at pilots. If they do something wrong, ok, we'll work it out. "

A Worthy Career

From your own flying experience, I am sure you recognize and respond to professional controllers in the same way controllers recognize pilots who have their act together. Back in the Vietnam era, I served as a controller in Seattle and Thailand, and later as an instructor at Tyndall Air Force Base in Florida. Take it from me: it's hugely challenging and intensely rewarding. It takes years to perfect the skill and judgment to be able to handle the contingencies which can pop-up in such a complex, integrated system. Not everybody can juggle all those balls, day after day, and keep their sanity. It's not a job, it's a brotherhood.

For controllers who want to spend a few more years using their hard-earned skills and earning decent money, Airboss and similar companies are a great option. It's just further proof that this avocation we share is an amazing enterprise, full of diverse careers, clever technologies and fascinating people.

About the Author

Mike Jones is a 4,000 hour commercial-rated pilot who has more than 50 aircraft types in his logbook. His pride and joy is his Cessna T210, which has carried him to every corner of the U.S. and Canada for more than twenty years. He's always accessible at PilotMike2012@gmail.com.

