GOING VISUAL

BY

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Some people think you can't be a real pilot unless you've got an instrument rating. I went about five years with a simple private ticket before it fell my lot to become a meter-reader. That was quite an accomplishment back in the day. When I first got the rating attached to my ticket, it seemed to have the same effect that carrying an umbrella has on rain. There wasn't a cloud in the sky for the next month that I could use to exercise my new freedom.

But soon I passed the tests to be an instrument instructor, which is why I wanted to become instrument rated in the first place. This was back in the middle sixties, when it was quite a novelty to hear of anyone flying on instruments in a single-engine airplane.

My understanding of the process grew quickly, as I trained a series of instrument students. I remember waking up one day and realizing that IFR was pretty much like VFR, except that you were doing all your navigating using the radios and that you were under positive control of ATC, in order not to run into another IFR aircraft when you couldn't see where you were going. And, of course, there was the issue of keeping the airplane under control when you couldn't see the horizon.

I also started to understand that the air traffic control system was quite flexible, if you knew what you wanted and

how to ask for it. For example, I was trying to get from New Orleans to San Antonio one day, and had filed along Victor 20, which was supposed to take me right through Houston and on to SAT. This route would get me there with just enough fuel to be legal, provided that the tailwinds were as forecasted.

A practice I had adopted by that time was to get an update from the weather man just before departure. The briefer told me that there was a nasty looking line running north-south about to come ashore right up thunderstorm alley, between Beaumont and Houston. The line had not quite made it to shore, but he told me that, at my speed, I'd probably get there about the same time as the thunderbumpers.

In those pre-computer days, there was a mandatory half-hour wait between the time you filed your flight plan and when your clearance became available. I knew this would be closer to 45 minutes, by the time I had filed another flight plan and waited for the clearance to be generated. This delay would give the line even more of a head start, a situation I wished to avoid.

So I departed on my original flight plan, "cleared as filed," right down Victor 20, which would have taken me through about 150 miles of benign VFR weather before we'd encounter the heavy-duty clag. I got handed off to departure control and told them I had a request. Would it be okay with them if I changed my route of flight and my destination?

He said sure, go ahead with your request. I told him I wanted to go slanty-wise up the airway that went northwest and would take me comfortably north of the scary stuff, to arrive somewhere around Temple, Texas with an adequate fuel reserve.

Then I could put it on the ground and further exercise my decision-making skills.

"Cleared as requested," came the reply, with nary a pause in the proceedings. In other words, I had worked a deal with the controllers that totally changed what I intended to do, and they approved it without so much as the blink of an eye. I thought that was a pretty easy way to save 45 minutes.

That kind of operation wouldn't have been feasible, to my way of thinking, if I hadn't been flying through good VFR weather at the time I made my request. I had no intention of going anywhere near the squall line, but if ATC had proved intransigent, I could simply have cancelled and completed the trip under VFR.

Then there was a trip I made to Atlanta. That can be an iffy kind of place to get to, depending on which airport you're headed for, what kind of weather is occurring, and how much traffic you're in competition with. I usually file IFR when I go up there. IFR is sometimes much simpler than VFR, since you often have somebody simply tell you what to do, and all you have to do is do it.

So there I was, boogying along at 5000 feet somewhere over rural Mississippi. It was a hazy summer afternoon with around 4 or 5 miles of visibility – one of those milky days with essentially nothing to look at outside the plane. The air started to get a little bumpy, and I requested a climb to 7000. The controller claimed to be unable, and handed me off to someone else. I repeated my request, and was told that the new controller was also unable.

I was technically in VFR conditions. All I wanted to do was climb up into some cooler, smoother air. So I requested a climb to VFR on top. There was a pause while they looked that up in the controllers' manual. Then I got something like this:

Climb and maintain VFR on top. If not VFR by 9000, maintain 9000 and advise.

So I checked out of 5000 and started climbing. By the time we got to 7500 feet, things had improved and I reported that I was VFR on top and would be flying at 7500 for a while.

For anybody who's a little rusty on this stuff, when you're maintaining VFR on top, it means that you are still on an IFR flight plan, but that you have none of the privileges of that condition. You must remain in VFR conditions, maintain a VFR altitude appropriate to your direction of flight, and must provide your own separation from other airplanes.

"Why would you want to do that?" I hear you asking. The answer it that I was able to maintain VFR without any problem, so I agreed to release the controllers from the responsibility of separating me from other IFR flights, in exchange for their permitting me to change altitude at my discretion. It's not often that you do that, but sometimes it gives you just the flexibility you need, as it did in this situation.

When I got handed off to Atlanta Approach, they seemed a little confused. "Are you IFR or VFR or what?" asked the guy. I explained that I wished to conduct the remainder of the flight under IFR, and he descended me to an appropriate IFR altitude. The flight concluded with him telling me what to do and me doing it.

Another time you may want to use VFR on top is when you find out that the controllers can't see you on radar and you're in a location where they can't provide IFR separation any other way. It happened to me one time when I was flying out of Las Vegas, trying to get over to Death Valley for an early-morning flight down below sea level. There were no airways or fixes they could use for IFR separation, and I was way under their radar. But I didn't want to give up the protection of having a flight plan. So I agreed to proceed "VFR on top," this time meaning that I was actually flying VFR but was still technically plugged into the air traffic control system. My hope was that someone would come looking for me if it should happen that I didn't show up for dinner later that evening. The procedure saved me the trouble of trying to get in touch with flight service and filing a VFR flight plan, which I often use when I'm flying out in the boonies where nobody is expecting me for a couple of weeks.

The most common use of restricting an IFR flight to visual conditions and separation comes with the visual approach, an often-used mode of arrival for general aviation flights. When you're cleared for a visual approach, you're still technically on an IFR flight plan, so this procedure accommodates flights that, by law, have to be conducted under IFR. Originally an aircraft had to be in radar contact, but that requirement was later dropped. The visual approach relieves the pilot of having to run an instrument approach procedure, provided that he is in VFR conditions, can maintain VFR all the way to the airport, and either sees the airport or is following another aircraft that has the airport in sight. Here is another example of an operation conducted under an IFR clearance but restricted to VFR weather.

It essentially permits the pilot to make a VFR landing without losing the IFR clearance required by his operating rules.

A less used and less understood procedure is known as the contact approach. This one is the IFR equivalent of a special VFR. It is sometimes used when a flight is in the clear and can see the ground, but is not technically in VFR weather conditions. Whereas ATC can initiate a visual approach, the pilot must request a contact approach.

When he is cleared for the contact approach, the pilot must maintain visual contact with the ground and must be able to navigate to the airport by following landmarks he can see. The pilot is required to maintain 1 mile of visibility and remain clear of clouds. If either of these requirements cannot be met, he must abandon the visual approach immediately and notify ATC that he is executing a missed approach. Since he's not following a standard instrument approach procedure, it's sometimes questionable how he's supposed to keep himself clear of terrain and microwave towers as he climbs blindly into the clag.

The one and only time I ever used this procedure was during a foggy morning at Lakefront Airport. I was working with an instrument student who had just made an ILS approach to runway 18R in actual instrument meteorological conditions. As we pulled up from our approach, not having seen anything but fog, the tower called and suggested that we might be able to "get visual" if we could turn out to the east. He said that pilots had reported being able to see the ground out there. So we did, and as we climbed through about 800 feet, we popped out of the cloud and saw the approach end of runway 27 peering up at us.

I immediately requested a contact approach. My student cut the engine and began a left base turn, pulling on maximum flaps and maneuvering toward the runway. The tower asked us if we had the runway in sight, and we told him that we did. He cleared us for a contact approach, and we landed, entering the fog bank about half-way down the runway during our rollout. Shortly after our arrival, the fog moved eastward and covered the airport so thoroughly that nobody was able to land for another hour.

The company for which I worked at that time had a rule against using the contact approach. The way the boss looked at it, if the weather was not good enough for a visual approach, we should just suck it up and run the full approach procedure prescribed by the terminal procedure chart. He said he didn't want his pilots groping around in the clag, trying to find the airport and not having any minimum safe altitude or a prescribed missed approach procedure to use in case things did not go as planned. To this day, I heartily agree with his assessment of this procedure.

The contact approach used to be used by airline flights in the days when radar was not common around the terminal areas. In those days, radar contact was required before a flight could be cleared for a visual approach. But imagine the DC-3 captain approaching Gulfport late at night, with no traffic reported within 50 miles of his position. The night is clear, the stars are bright and the moon is shining. The captain sees the airport's rotating beacon from 20 miles out. The only reason he is on an IFR flight plan is that Part 121, the FAR under which he is operating, requires that he maintain an IFR flight plan at all times.

All this captain had to do was request a contact approach, then proceed, for all practical purposes, under VFR until he's on the ground, safe and sound. Used this way, the contact approach was a very practical alternative to what would otherwise have been a time-wasting approach ritual.

One other example of visual restriction during an IFR flight and then I'll let you go. I was climbing out of Mobile, Alabama one foggy morning. It was one of those days when the sky was filled with stacks of horizontal clouds that we call stratus decks. There was good visibility between the layers, but there were several of them separating the ground from the clear air above.

I heard the controller tell a King Air to maintain 2000 feet until he could get him clear of a Cessna climbing through 3000 feet. I looked behind me and just happened to spot the King Air way off behind me. In those conditions, airplanes sometimes show up nicely against the background of lighter clouds.

Since I was the only Cessna in the area, I concluded that he was talking about me. I called the controller and told him I had the King Air in sight and could maintain visual separation. This relieved the controller from having to keep the other aircraft the required horizontal distance from me as he climbed through my altitude. I think the standard at that location was five miles. Obviously, if one of the pilots can see the other plane there is no compromise to safety in allowing the two flights to get closer than five miles apart. This allowed the King Air pilot to get up into thinner air more quickly, where his engines were designed to run without consuming so much fuel.

One thing to remember when a controller tells you to "maintain visual" on another aircraft, is that you should

promptly call back promptly and report losing sight of the other plane. It's probably not a good idea to agree to this arrangement unless you're very sure that you can keep the other aircraft in sight.

Visual restrictions during IFR operations are a handy way of expediting the movement of traffic when standard separation standards are not required, or when an aircraft on an IFR flight plan is being operated in VFR conditions. As long as everyone is careful to use it prudently, the voluntary VFR restriction can add flexibility to the operation and save time and money for the flight's operators.