

Excerpt from Interview with Scott Schertz

AI-A-L-2012-029.02

Interview # 2: October 29, 2012

Interviewer: Mark DePue

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Schertz: You actually spray a little bit wider than the wingspan typically.

DePue: Tell us a little bit about the actual flying of it, the controls and what all is involved with not just flying the aircraft but keeping track of when you're disbursing and knowing where you're at and things like that.

Schertz: Well, it is a busy place. Obviously, you have to fly the airplane very precisely and then you do have systems to manage. You are manually turning the spray on and off at the ends of the field and accounting for drift concerns there. Basically, from one pass to another, you're advancing it, you're telling the GPS that you're ready for the next pass, and obviously, you have to sort of preset it up on what type of pattern, so it knows what you want for that next pass. In other words, you're not reprogramming it. Each time, it has sort of a set sequence of things to do, so you need to have that set up ahead of time and then you give it a reference line and it goes from there.

DePue: Well, it almost makes it sound like the GPS system is navigating, is determining where you go more than you are, or are you actually, on the

controls, is there some kind of alarm system that the GPS system will give you, to make sure you're on track?

Schertz: Well, basically it's telling you where to go, it isn't controlling the airplane. It's basically a left-right indication and so no, it is not controlling the airplane; however, it's giving a desired place for you to be and indicating that and whether you're on it or not.

DePue: Strictly readouts or is there some kind of a sound alert on this as well?

Schertz: It's strictly readout. Basically, on the live bar of it, you can control, like the first light might be three foot off and the next light might be seven foot off, and then also there's a digital display that will say you're right on, or one, two, three, or a hundred foot off. It will just count on that, but it's down to very, very close accuracy.

DePue: For the actual steering of the aircraft, have you got a wheel or sticks?

Schertz: It is a stick and rudder pedals.

DePue: How many of your appendages are you using? Both arms, both hands and both feet?

Schertz: Oh, yes.

DePue: What are you doing with the feet then?

Schertz: The feet are on the rudder pedal, which controls the airplane in yaw axis, and you do use that for very minor corrections across the field. If you're two or three foot off, you just sort of press the rudder and it will skid over a little bit. In the turn, it is a combination of the aileron and the rudder, to help it turn, and also the elevator. So your feet are controlling the rudder to

aid in turning and minor turns and then one hand is on the stick, to do the row and the pitch via the stick, and then the left hand is continually adjusting the throttle, the flaps, and then also turning the spray on and off and also doing the pass advance for the GPS.

DePue: How would you compare driving a car, and most everybody can relate to driving a car, versus what you have to do when you're actually out working a field and doing the application, in terms of the difficulty?

Schertz: A car is like riding a tricycle and this may be a unicycle or something to that effect. I mean, you've got a lot more dimensions. You have up and down in addition to how fast you're going. You're constantly making small corrections and turning the disbursement on and off, so there's a lot more involved and many more dimensions than driving a car.

Interview with Scott Schertz

AI-A-L-2012-029.03

Interview # 3: October 29, 2012

Interviewer: Mark DePue

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DePue: Okay, we've got you in the cockpit. Talk about what we're looking at here.

Schertz: Well, this is my office basically, in the summertime, for the most part. You have your basic flight instruments and engine instruments, similar to

most any airplane. However, the thing that is really different is the spraying GPS controls, and then there's also a screen here in the center that displays a lot of information, even down to an outline of the field you're spraying, and then it will show where you have and haven't sprayed. And then the biggest part of it is the light bar out front, which I'll turn on, and we'll see how much of it shows up here inside. But that's the main part of the guidance, is out there in that box, close to the front end of the hopper.

DePue: So that's what you're looking at and you can tell where you need to be in the field.

Schertz: That is correct, yes.

DePue: Can you talk us through what each foot and what each hand is doing, then, when you're actually working?

Schertz: Okay. Well the feet are on the rudder pedals. Like we talked about earlier, they do control the yaw, and then also on the ground, the tops of them are the brakes. If you're used to a tractor with individual brakes for the different sides, that's what this is like. So you can use the brakes not only to help slow you down but also steering on the ground. The right hand is controlling basically the row and the pitch of the airplane. Of course, you have to continually do that. So the combination between the stick and the rudder is what's handling the row and the yaw and the pitch, et cetera. The left hand is busy in that you've got your power controls over here, you're controlling the engine, propeller RPM condition and actual power output

through this, and then the flaps are beside that, because you do use those on nearly every turn, to help tighten the turn. I'll get the helmet out of the way that would sit in here. You've got the liquid spraying control here and the dry spreader control here, and on those, that's what you're turning the spray on and off with, or the spreading on and off with, and then there's switches for the GPS control on that. So, I mean that's it in a nutshell, is you're controlling the engine and your flaps with your left hand, and the spray or spreading dispersement with your left hand, and the left hand is busy back and forth there the whole time.

DePue: Is there a standard checklist you go to when you first fire it up and start?

Schertz: There are standard procedures.

DePue: You know them by heart.

Schertz: Yes, I do. Basically, you have to make sure you have good batteries to pull the engine up enough before you introduce the spark and the fuel to it.

DePue: How long of a runway do you need if you're fully loaded?

Schertz: A half mile.

DePue: And if you're empty?

Schertz: This, you can get off in about four or five hundred foot if it's empty.

DePue: Okay, anything else in here we need to know about?

Schertz: Just a couple other things. You do have aviation equipment for communicating with a tower, if I'm spraying close to a controlled field. And then also it has a lot of navigation equipment. There's also, with that, a transponder, so if I'm in a radar environment, they can identify who it is,

and then also there is a business band radio for communicating back to our trucks or office with it also.