

>> GEORGE SEMPLER (FAA): Good morning and thank you for the opportunity to speak with you this morning. Before I start, I was thinking about how often you should hold these? In my opinion, annually would be a good time. And then the closer to realization, you might want to space them a little closer. Once a week or something like that.

I want to share with you today some of the things that we do at the FAA and give you some potential effects that a new datum horizontal vertical would affect things in the FAA.

As I speak today, the FAA is moving toward modernization of the air traffic control system. You may have heard this in the news known as NEXTGEN, the next generation air transport system. Our European partner is doing the same type of thing; theirs is called SESAR which is single European sky but that's their sandbox in this particular case. So, next generation involves hundreds and hundreds of different programs over the years and many, many different programs of which there is one particular aspect that this subject matter will affect. What NEXTGEN will involve is a moving away from ground-based navigational aids, traditional radars and communication to space-based GNSS enabled by navigation and data uplink. I'm an old cartographer. You can tell by my white hair. And the way you would fly from California to New York, is you fly through a labyrinth zig zag from South Carolina with GPS, that will enable you to fly a great circle route which in effect would reduce the amount of fuel, make it greener skies, so on and so forth. So to do all this, accurate geodetic data will be a critical enabler for the next transition, especially in the approach departure and ground movement environments. There is one accomplishment of this I would like to share with you after we turned on the WAAS system enabling vertical guided approaches into airports. WAAS approaches now out-number instrument landing system approaches. So what are the effects?

Well, there are many things I have to consider. There are thousands and thousands of instrument approach ground-based approaches and GNSS derived airport approaches that depend upon accurate geodetic information. There are hundreds of minimum vectoring altitudes and minimum in-route altitude charts that depend upon elevations and position. There are thousands of GPS derived approaches, departures and in-route wave lengths that are dependent upon this data. There are hundreds of thousands of regulatory obstructions, man-made things sticking up out of the ground in the way of approaches and departures and perhaps millions of naturally occurring features, the trees, the mountains, so on and so forth that can't report themselves to the FAA. We have NGS to go out and survey those for us and depend on latitude, longitude and elevation. There are thousands of existing airport surveys and hundreds of planned airport surveys in the future that this transformation is going to affect. And finally, there are thousands of regulatory and non-regulatory air space areas dependent upon geographic data.

So the reason why I ask about the magnitude is how much is that going to affect all the products that we have? Because in short, we have millions and millions of points in elevations that's used to describe the national air space system. I don't know exactly how we will go about all this because after all, this is all relational data. Are we going to apply the changes all in one piece? Or are we going to work them as we work each particular procedure? I don't know yet. So that's why I'm interested and would like

to come back as often as we can so we can prepare for this. Thank you.

>> MR. DOYLE: Just for the benefit of everybody here, I would like to point out that the National Geodetic Survey has a very special longstanding relationship with the FAA. We've been responsible for the airport surveys going back to the early 1940's, so we've been with them a long time. In fact, their aeronautical charting division is right next door to us. So they are a big player with us.