

**General Stephen R. Lorenz**  
**Commander, Air Education and Training Command**

**Air Warfare Symposium**

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**Moderator:** Our first speaker is the Commander of Air, Education and Training Command. He's responsible for the recruiting, training, and education of Air Force personnel. His command includes Air Force Recruiting Service, two Numbered Air Forces, and Air University. You have his bio in your program. Please welcome General Steve Lorenz.

**General Lorenz:** [Video shown].

First of all, it's indeed an honor to be here in this symposium here with AFA who does a magnificent job.

To all the vendors and supporters, I thank you for your support.

I've been going to AFA functions since 1980. I can remember the first one in Washington, D.C. I've learned a lot, and it's all about marketing. So I'm going to do a little bit of marketing today. I want you to remember two words. AETC and innovation.

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Our innovation started a long time ago, in fact 100 years ago. In fact it was March 3, 1910 at Fort Sam Houston on a parade field. Benny Falloy who had only 54 minutes of training was told to do the following things. Just so you know, on the 3<sup>rd</sup> of March this year we're going to reenact this flight at Fort Sam Houston and everybody's invited, and they're really going to fly a replica.

But look at the instructions he had. Build the airplane, teach yourself how to fly, assess the military potential -- I like these two especially -- don't crash, and then these orders guaranteed Don Hoffman a job for life, take along plenty of spare parts.

So think about this infantryman, this West Pointer who grew up in a world where there was no aviation and in 1910 he's the first pilot in the United States military. He's an Army officer. So he started the tradition of innovation in our Air Force.

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Today we have a lot of innovative airmen. You've heard a lot of speakers get up and talk about what's going on in the AOR, all the great things that are happening. But these are the type of people -- I want you to know, most of the people in this room are baby boomers. Today only four percent of the officers in the United States Air Force and enlisted people are baby boomers. Fifty-five percent of them are millennials. Fifty-five percent, and that number is going to get bigger and bigger. This is the type of thing they do. Question the status quo, apply critical and creative thinking, adapt to new missions. These are the things, employing cutting edge of technology. That's what you do for a living. That's what you attempt to do, because technology is one of our asymmetrical advantages. That's what Benny Falloy was doing in 1910 because, think about that bi-plane and how far it moved technology.

But the innovation, innovation, that one word, is what makes America great, I think, and it provides our asymmetrical warfighting advantage.

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These are the AETC core competencies. They were set up there, and it's pretty straightforward. It's all over our buildings in the old academic building which is the current headquarters of the Air Education and Training Command. It's on the walls in big, brass letters. Recruit, Train, Educate. Every one of our Air Forces like Air University, Recruiting Service, 2<sup>nd</sup>, 19<sup>th</sup> Air Force, they all know where the fit right there. It's pretty straightforward. We're very blessed. We take America's national treasure, the young men and women, bring them in and process them through our basic military training. We recruit them, basic military training, technical training, and then educate them throughout their careers. In fact most people in this room are a product of that. Every one of you, I bet you, has participated in some aspect of that.

But we've added, just starting -- next slide -- this year a new word. It's going to be in big, brass, bold letters. Innovate. We have to.

The Oodaloops of this world that are getting faster and faster. And Benny Falloy, they had Oodaloops too. They didn't call them that, but what they did is the time span is getting faster and faster and we have to work at that.

So we in Air Education and Training Command and the United States Air Force, we have to innovate. That's what's going to drive how we recruit, train, and educate.

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This is who we're recruiting. The new cyber teenager. We're going to make these people, and you see them every day, we bring them in the basic military training and we send them off to war. And we don't send them off -- We do send them in squadrons and wings and groups, but we send them off as individuals, individual FMers or civil engineers. You heard about it from Chief Roy and the Chief about all the different things that are happening. That's who we've got to recruit. We have to tailor what we do to meet their needs, to meet our nation's needs as warriors. We need to recruit these digital natives.

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How do we do it?

A.J. Stewart in Recruiting Service is just doing a bang-up job. But it's different than it was when say in 1969 when I came in the United States Air Force as a cadet. The first thing you have to do is you have to inspire them. Most people don't realize that in the cohort of 17 to 26, 17 to 26, only 25 percent of them can enter the United States military. Twenty-five percent. The top 25 percent. They have felony convictions, they're obese, they have drug problems, they have education problems. Seventy-five percent cannot get in and we're all competing -- business, colleges, universities, all those are competing for that top 25 percent.

So how are we doing? The way you do it is you do it through things like air shows, NASCARs, mobile tours. You've seen them.

By the way, just so you know, when I was the Air Force Director of the Budget I tried to kill NASCAR two or three times. I was wrong. Because I've been there, I've seen it, I've seen the effect that it has to get those leads to bring them in the doors, the type of people that want to join our United States Air Force.

Engage. First you have to inspire, then you engage them. How do you do that? Live chats. I want you to realize that at Recruiting Service right now there are a bunch of retired recruiters who are civil servants, contractors, sitting down every day chatting on the web,

talking to potential recruits. If you get them to come talk to you, it's amazing how many of them get there.

By the way, for every 110 people, leads that we go after, we only get to recruit one of those because 109 of them drop out. It's a lot of hard work.

Finally, after you've inspired, engaged and recruit, now you've got them in Air Force.com. If they come to that web site, 80 percent of them join the United States Air Force.

Everybody asks you how are you doing? Especially in this economy. We're already at 68, in the first five months of this year we've already recruited 68 percent of our FY10 goal, and 21,000 people are waiting in line to get in the United States Air Force. We're recruiting 32,500 people this year. It's been a smashing success.

The economy really doesn't affect how we do in recruiting in the United States Air Force. It does affect how it is in the other services. What it really affects is quality. There's the quality. Ninety-one percent of our recruits in the top three categories. By law, we have to recruit, there are five levels of [ABVEP] scores and 60 percent of them have to be in the top three categories. The highest level in the history of the Air Force -- 91 percent are in the top three levels. That's why you run into all these bright shiny Americans like represented by the 12 Outstanding Airmen, and how good they are. We are the envy of the world because of our NCO corps.

Once we get the recruiting done, how do we treat the recruits and the officers? How innovative are doing? Have we changed things? This is not your mom and dad's Air Education and Training Command.

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Enlisted training. Starting last year, took a while to build this, we extended basic military training from six to eight and a half weeks. It's made a big difference. We call it the Beast. We take them out in the field and we exercise them. It's an amazing event to behold. It's wonderful.

Now you'd think if you extend the course two and a half weeks and make it tougher, that attrition would go up. Attrition is at its lowest level in ten years. It's about teamwork, esprit de corps. It's an amazing thing to see.

Officer training. We've had several major events occur. This year after three years of hard work between Craig McKinley and I we moved the Academy of Military Science from McGee-Tyson's Air Base to Maxwell. Now they're both located at the OTS campus. What we want to do is get synergies because reserve officers, the total force reserve officers and our Guard officers and our OTS candidates for the regular Air Force and our COTS officers, are all now trained at the same location. That was the only thing that hasn't been at the same location.

The next commander of OTS is going to be a Guard officer. It's an exciting time to be there.

Air and Space basic course. I don't know if Chris Miller's out there. He was here yesterday. Now I'm going to make a little pitch here. And to my MAJCOM commanders, this course is really fantastic now. It's been around about ten years. We completely revamped it. It's all expeditionary. They even get ECAC training now. We send them through there and we deploy them. And all these lieutenants. Now I want you to think about 30 or 40 years ago, you had giant squadrons and there were lots of captains and majors. It's not that way today. There are squadrons out there but we're sending lots and lots of our officers in different career fields straight after training into combat in onesies and twosies. They need more training and education at a younger age than they did say when I was at their age. And Air and Space Basic Course is really making a difference.

Now these are innovative things that are happening as we get them in the service. Let's talk about their follow-on training.

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What about air training? We're going to do this through air, space and cyberspace. There are a lot of neat things going on. The Chief decided that we would send 100 SUPT graduates for FY10, 11, and 12, straight from pilot training into RPA training. He also decided that we'd send two beta classes which we have done. From initial concept to actually putting the first students in, it took us six weeks, but we built a course. We know we don't have it 100 percent correct. We're working on that. But we built a course and we're pushing people through it.

There are people that we started this course last fall, fall before last, in the January timeframe, they're already flying combat. They're flying combat and making a difference out there on the battlefield with RPAs.

Intelligence training. You go to Goodfellow. They take real feeds from the AOR and they use it in their training. That Oodaloop, that time that goes faster and faster. They're using that as a training and education experience there at Goodfellow for our intel officers and our sensor operators. It's amazing to watch.

A lot of you in this room have talked to me about the future of flying training -- the thing that a lot of us are used to. What we're doing is that T-38, those who learned how to fly, it's been around for 43 years. It's a great machine. But we've torn 32 of them down and found that there are 156 single points of failure. We were planning to replace them around the '20 to '26 timeframe, and what we've tried to do is to articulate the requirement for the future, and maybe move forward a couple of years. So it's in the process of following all the DoD regulations on acquisition. We're doing AOAs and JROS has approved it, and we're moving forward on that. Hopefully in the next year or two we'll get it into, we're trying to get it into the POM in the FY12 POM and we'll see how that goes. But we need a new trainer and it's a valid requirement and the day will come when we will get that trainer. I just don't know when it will happen.

Future pilot training. In this room are people who are graduates of undergraduate pilot training, but most of the younger people are graduates of the specialized undergraduate pilot training. We have certain issues with that, and we're going to have to think about that. And you have to reevaluate when you're buying a new airplane. This is a good time to reevaluate. The next time to reevaluate how we're training is probably when we have to redo the T-1 in ten years. So we're looking into what the future of pilot training should look like. Those are two innovative new ideas we're looking at.

Next slide. Let's talk about space training. We've worked very hard. You heard General Kehler talk yesterday about all the things, we were working hand in glove with the two commands because we're here to support all the major commands and the combatant commanders, but standardized space trainer. We worked with USAFA and a bunch of people, and contractors have been involved with this. It's where they take the development and building a satellite modularly through the entire system and let students work on it and build it and learn just like maybe the building block approach to flying. We've reduced the cost and supporting multiple platforms. You can see that from eight to one.

You can see the trainer here on the satellite model. We've done a creative partnership there. ICBM maintenance virtual trainer. You know, in younger days, a long time ago, I had a part task trainer like in the KC-135 made out of cardboard. You can build trainers now and they're on a flat screen and you can move the switches. It's absolutely amazing. You can take it home, put it on a disk. It's just an exciting time to be alive, an exciting time for these young people to learn how to do this training and education.

Here's another one. And General Kehler and I talked about this, and he made the decision that we would move Space 200 and 300, they're still at Petersen, but they now belong to Air Education and Training Command. So we're going to take those courses and get them Master's level courses so that everybody gets credit for taking those courses.

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Innovations in cyber training. I'll use this as an example. AFA has been on the cutting edge of this and we really appreciate it. You take Civil Air Patrol and ROTC cadets -- This afternoon I'm going to present some awards. I know General Kehler has been there and discussed it. The Chief has done that. We have a competition. There's a contractor here who has built a network and the young people, the teams have to defend it and they get scores. So what we're doing is we're starting the journey of building cyber space warriors, young in the high school ages. Then as they come into ROTC, OTS and the Academy, they'll be inclined to get into that business. It's pretty exciting stuff. And by the way, when the teams win, there's lots of high-fiving going on. It's just fun to be around and see the energy.

Technical training. In cyber training we're building an undergraduate cyber training course. It's going to be 23 weeks long. It's going to be at Keesler Air Force Base. We're starting it this year. Nineteen new enlisted cyber courses. Everything, in that area it's like, in fact I tell all my staff. Especially in cyber, it's 1910. We're still learning to warp the wings in cyber, and it's an exciting time to be alive. In the years to come they're going to erect, there will be some guy or gal in the future, 50 years from now, thinking about, talking about a Benny Falloy for cyberspace. It's going to happen. That's just the way it is.

AFET is our technical, there are many AFET graduates here in this room. And the AFET is the perfect place with

their PhDs in electrical engineering, and communications and all the different courses. We've built the cyber masters. They've also taken over and starting in June we're going to do a beta class, but on 1 October we start the Cyber 200/300 training. We have a skift already built, the computers are all in place. We're recruiting. It's going to be a TFI initiative. In this arena we're moving rapidly, almost at the speed of light.

Air, space and cyberspace training prepares the airmen for certainty. The Air Force, especially when you fly or hang out and handle nukes, it's a checklist environment. Training. But have you ever thought about this? Education, the bedrock of everything, the great equalizer, what it does is it prepares them for the uncertainty of the future.

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What are we doing in education? Some really good innovative things.

Now I want you to picture those individuals, the officers and the retired officers in this room, about going out and getting your Master's degree. Do you know that right now at this very moment you can get a Master's degree in the United States Air Force with tuition assistance, which is a great thing. There are 427, I believe, different colleges that are offering Master's degrees, and our young officers are taking advantage of it and that's wonderful. It's magnificent. I call them tantalizing choices.

Now we're offering on them, we started this just three years ago, an on-line Master's for majors, which you get your Master's degree, you get ACSC and JPME-1 and you can do it anywhere in the world. The student to faculty ratio is 1/20. We started it, and we thought we'd be successful at 200 people signed up for it. This is how many people are doing it today. The course today at Al Peck's school, there are 1200 students including civilians, Guard, Reserve, active duty taking it. So far, and this next class which graduates next week, there are 528 majors that have graduated and gotten their Master's degree, ACSC and JPME-1.

What we've done is we've moved the ball even further down the road in just the last six months. We've opened it up for captains. So what we're doing is, if you take these courses up here, you're going to take about seven of these courses, and then you're going to take a few more courses and you'll get a Master's degree. Then when you are

selected for major you take four more of these courses and you'll get ACSC and JPME-1. It's about efficiency and effectiveness for a worldwide, deployed Air Force. And they're voting with their feet. They're doing a great thing. And you save \$4.9 million in tuition assistance every year.

Associate to Baccalaureate. Chief Roy talked about this yesterday. We started this three years ago. We went and partnered with, and I think Al said there were 45 colleges so far. They will accept 100 percent of every enlisted person's credit. Now think about this. Each university is a business. They're into business development. So normally when you transferred courses from CCFR or maybe even ACSC as an officer, they'd accept 30 to 40 percent of your credits because they want you to go to their school, which is understandable.

But what we did is we partnered with them and basically did business development for them, and they accept 100 percent of the credits. They started here and you can see the enlisted people are voting with their feet. I call it 12 clicks to be a junior. Go on Air Force Portal, you say you're AFSC, I'm a financial manager, a civil engineer, a maintainer. It says the following ten colleges will grant you a degree in financial management, a Bachelor of Science in Financial Management or whatever you want. You go to their web site. It goes straight there, clicks onto there. You sign up, and your last two questions are, do you want your transcripts transferred to this college? And do you want tuition assistance? It's done. They take courses, once again, all over the world through distance learning. Smashing success.

Education, as you can see, is the springboard, I think, to intellectual agility, and that's what we've got to do. AETC's got to be agile, especially in the 21st Century. The things that we've done in the past are not good enough for the future.

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This Oodaloop, I've talked about this over and over again. It's just getting quicker and quicker, especially in cyberspace which is literally at the speed of light. We have to be agile in all aspects of our Air Force, because our enemy is increasingly agile. We were talking about this at dinner last night about on the other side of the planet. You heard Gary North talk about what's going on in the Pacific. You heard Roger Brady talk about what's going on in Europe. CENTCOM. We heard the General talk about Afghanistan. They're agile. He was talking about have

they adapted to his leadership styles, to what his goals and objectives are. We have to teach our younger generation to be even more agile. And by the way, that's the great equalizer in the United States, the technology and the innovation. It's not just materiel, it has to be up here between their ears. We've got to do lifelong learning for all of our young people.

So how does AETC help you?

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We do it in three ways. Consultancy. People don't think of that. For over 50 years, remember, AETC's been around before the United States Air Force stood up, was in the Army Air Corps. We have that core competency of training and educating and recruiting and now innovation. So what you want to do is call us. I like to use the term call 1-800-USE-AETC. We can make things happen, such as the Iraqi Air Force Academy standup. We worked that with the Air Force Academy also.

Then we also can provide training solutions. We can develop whatever the heck you want us to do. That's what our job is.

Then delivery. Most of us are used to that. We show up down at Keesler or Vance or whatever base, and we deliver. But the issue is, we should not just deliver. What we should do is we should think about ways to help you do it more efficiently and effectively. And we don't have to own it to assist you.

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So in summary, I'll end it on this. As I told you, this marketing pitch for AETC and the word innovation. We're building on the past to develop the future. Innovation, all of you agree, we all agree it's America's asymmetric advantage. All we ask you to do is if you have a training or education or recruiting need, just give us a call.

That's all I have. Is there time for questions?

[Applause].

**Moderator:** Thank you, General Lorenz. I already have about a half dozen questions.

But let me take the prerogative of the Chair to ask you a question you didn't touch on today. AETC is doing

great work in the language area. Not only with language for our people, for the Air Force people, but also for international officers and NCOs that are coming for training in the United States. Can you tell us a little bit about that?

**General Lorenz:** Sure. There are two areas. This is for Americans that head off, in fact I'm going to go visit them in Monterey. There are about 1500 in the Army and the Navy in Monterey, California. DLI runs it. And we send all of our people that are going to go to language school out there. That's been around for a long period of time.

For the last 15 years down at DLI down at Lackland Air Force Base at this very moment, at this very moment there are over 1,000 international enlisted officers and civilians learning English. And it's an amazing thing to watch. You go and visit them. It's a big giant campus. It's like a college campus right in the middle of Lackland Air Force Base.

The other part of this is that this DLI also sends teams out to all parts of the world. They send people to teach people how to teach English as a second language to Yemen, to Afghanistan, to Iraq, Horn of Africa, everywhere. They're amazing professionals. They do a wonderful, wonderful job.

The breadth and depth of their experience on how to teach English is phenomenal.

Now in our war colleges, in our continuum of education across the enlisted course and the officer course, we've embedded culture and language throughout the entire system. In fact my aide is over here taking Air War College. In the first six week he took Spanish on Rosetta Stone, that's a new thing and you can take any language you want. We bought about 3,000 licenses for Rosetta Stone and there are people signing up all over the Air Force to take those courses on different languages.

**Moderator:** Talk a little bit about recruiting. We've heard earlier speakers talk about shortages. So shortages in certain career fields. EOD, security forces, medical corps. Where are your biggest needs? Where are your shortages and how are you trying to address those?

**General Lorenz:** There are eight career fields and it varies from time to time and it varies from year to year as to where the shortages are. Battlefield airmen, we're working very very closely.

Recently I was on the Fort Hood Commission for the month of December with Admiral Clark and Secretary West. My deputy team chief was a former 2<sup>nd</sup> Brigade Commander of the 82<sup>nd</sup> Airborne named Brigadier General Promotable Billy Don Farris. He said to me, General Lorenz, if there's one thing I could ask, he says, you know, if we had more JTACS out there in the field, I could drop more bombs and save more soldiers.

I can't think of a more compelling argument than that. Because that's what air, space and cyberspace power is all about. It's our asymmetrical advantage.

So we have issues that, we have a pipeline to get like JTACs, PJs, different things, ASOGs, all up to -- because the ASOGs and those people are going back and forth, back and forth. They have one to one dwells, different issues. I know that General Fraser is working that very very hard.

So we pump the pipeline up. But the issue is our attrition rate in those courses is like 86 percent. Is the course set up to graduate people? Or is the course set up to eliminate people? So what we've done is we've had several summits in those type of areas where we're trying to streamline the entire process, put an owner in the entire process and say okay, our goal and objective is to increase the number of students who graduate from the course and go out and serve in those key billets. We watched them quarterly.

Major General Mary Kay Hertog is the 2<sup>nd</sup> Air Force Commander. That's her job. She and I talk about it all the time.

Now on the medical side, there are certain hard to fill skills because they're very hard, long courses to get through. Now one of the things that's happening is we're building Joint Base San Antonio and BRAC '05 moved all of the schools from all the services -- Army, Navy, Air Force, to this central location. They're spending about \$2.4 billion in construction. What will happen starting in 2011 there will be 9,000 enlisted people going through training from all the services at BAMPSI in the Joint School.

**General Brady:** What's your capacity for [inaudible] for allied officers and NCOs?

**General Lorenz:** Very good. General Brady asked me what is our capacity to train allies. One of the greatest things, I tell this story and General Brady had heard this. I'll never forget this. I was the Commander of AU and we're at a party. At international parties, at the time

there were 176 internationals going to school at Air University. This was in '06 or '07. I can't remember what year.

There's a Moroccan major standing there. They're talking, and his spouse is there and she's in traditional garb. We start talking and Leslie, my spouse, says boy, your English is very very good. He says, well Ma'am, I went to SOS. He was going to ACSE. Then he said something that got my attention. He said, and I'm a 92. Meaning he was a 92 Academy graduate.

If you can take individuals who are very very young, from all over the world, and send them through our schools, and let them live in our communities like Montgomery, Alabama; like Washington, D.C.; like Monterey, California; like Fort Leavenworth. Pick one. You name the place. They get to see America as it really is, not what they see on TV, and we send them to school. They love it. You all know that. And then we have, and the younger you get them the longer we have them friends for life. And they will be allies in this world in the years to come.

So I fight very very hard at all levels, from the Air Force Academy to ROTC to BMT to all these areas to get more internationals, not just in our education system but in our technical training system. We have issue we're working right now with C-130s and the conversion to C-130Js. And how much production we can do. So we're working with AMC and with the Guard and the Reserves to work those type of issues.

But my personal opinion is the more we can get internationals to come from all over the world to our schools, or if we can't do that, to take our schools to them, the better it is. That's the ultimate in COIN. You're out there at phase zero operations, making a difference in people's lives.

Did I answer your question? Thank you.

**Moderator:** General Brady did mention to me as you got on the stage that your Avatar had a little more hair then -  
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**General Lorenz:** Yes. It's a couple of years older than I am.

**Moderator:** We have one last question. This is from an international officer in the audience. In view of the advances in innovation and technology, what's the proper mix of actual flying versus simulators --

**General Lorenz:** There's the age-old question.

**Moderator:** -- resource constrained environment.

**General Lorenz:** Excellent. First of all, everyone in this opinion who's been through an aviation school of one sort or another has an opinion on the subject and it's based on your personal experiences. The answer is, I don't know yet. I was talking about this the other night at dinner about the airlines, the first, they go out and they'd do 20 simula -- Whatever the number of simulators. The future dream liners was talking to some people, Whatever airplane it is, and their first ride in the airplane after they've done all the simulators, is a paying ride. By the way, that sounds like Air Mobility Commands because they want the Twicka to pay for their training and I understand that. [Laughter]. But the issue is, I also know that the foundation on which that aviator who's getting checked out in that airliner, a lot of them -- It used to be most, not most today. But many of them got their baseline in real life flying in the United States Air Force or the United States Navy, the United States Army. It was real experience.

What this is is about experience, and what the real question is is the combination of simulation, this blended thing. Simulation, how about flat screen computers on training, and also actually flying the airplane, and the mix of that. That's literally the 64,000 question. So far everybody I've talked to says it talks about a year and it takes about, give or take, 100-some-odd hours. We're still blending because we still have more opportunities in simulation, especially in the new simulators that they put out with the fidelity. It's absolutely phenomenal.

So that, I don't have the answer to that, but we are working on that and I know that there are people in this audience working on that very issue.

**Moderator:** Steve, on behalf of all of us at AFA and our Chairman f the Board Joe Sutter, I want to thank you for a very insightful presentation, and we wish you the best.

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