Remarks as delivered by ADM Mike Mullen
San Fernando Valley Engineers' Council Banquet and Awards Gala
Studio City, CA
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Thank you, Paul. I also like to thank the San Fernando Valley Engineers' Council for inviting Deborah and myself to help celebrate fifty two years of encouraging careers in math, science, and engineering. What a great, great legacy for our country.

General Yeager, Colonel Borman, distinguished guests; I am deeply honored to be here among trailblazers and record setters and among some old friends.

I actually have deep roots in this town. As Paul said I grew up here, not far from this very spot. I can't help but believe my old principal at Notre Dame High School, Brother Robert Hampton, would certainly be surprised to see me back here among a prominent group of engineers. Some of my classmates probably would be as well.

It really is a special treat to share this evening with all of you, made even more so by being in the company of two great men.

General Yeager, an American icon, one of my heroes and a man who I believe we all would agree typifies courage, character and the American spirit for explorations. Thank you for being here, sir.

And speaking of explorers, Colonel Frank Borman, thank you as well, sir; for helping pave the way, not only to the moon but to the realization of an entire country's deepest aspirations and loftiest ambitions.

Gentlemen, thank you both for showing us the power of dreams.

And it all starts with dreams, just last Saturday in Baltimore I had the good fortune of being with another wonderful bunch of scientists and engineers.

I was asked to present an award at the Black Engineer of the Year Banquet.

As I observed the awardees going up for recognition, one thing really struck me; it was the notion that the careers and achievements celebrated in Baltimore last week blossomed from what once were mere dreams.

That night I presented RADM Andy Winns, a Naval Flight Officer, with the Career Achievement in Government Award.

Andy hadn't dreamed of flying as a young boy. Which brings us something this Engineering Council understands so well, and that's mentoring. Mentoring is vital to the engineering profession just as science and engineering is vital to our Nation's prosperity and security.

In Andy's case he hadn't even considered attending the Naval Academy not until he was mentored by a sharp midshipman who visited his high school.

He soon set his sights on the Navy and on becoming a lawyer.

But while a midshipman, in a T-34 trainer, Andy flew for the first time in his life.

A sharp dip, a hard pull, and a loop over and he was hooked. Forget law school, he was going to flight school.

It turned out he wanted to fly all along; he just didn't know it yet. He only needed exposure to sit in a cockpit and hold the control stick and be offered the glimpse of an opportunity. Andy's now a two-star Admiral living his dream and inspiring others to live theirs.

Both the Navy and the industry you represent are challenged by change. We both face changes in the market place and changes in the global security environment and the pace of change is absolutely furious.

We need to keep up, get ahead, and stay ahead but we can't do it without good people. And it all starts with dreams, but it takes real people to make those dreams come true.

Specifically, for our purposes here tonight, it takes scientists and engineers and an entire cast of technicians and specialists, all of which take time to educate, train, and develop others. It also takes a broad base of students. We must all reach out and build that base.

The alarming truth is that the aerospace and defense industry, as well as the military, are not attracting engineers and scientists fast enough or enough numbers to replace those getting ready to retire.

Sadly, only one sixth of the approximately 2.5 million high school graduates annually in this country go on to earn Bachelor's degrees in engineering or science-related fields.

Just like Andy didn't know he wanted to fly, thousands of young students don't yet realize they might want a career in science or engineering. It takes mentoring to give them that insight.

Opportunities to mentor are plentiful. They even sometimes materialize out of the blue just like it did for senior software engineer, Dr. Jimmy Lee Davis, Jr. from the Miter Corporation.

Dr. Davis, last week was given an award for Outstanding Technical Contributions at the Black Engineer events. He talked about a feature article in a trade publication that detailed his life story and professional accomplishments.

Apparently a young upcoming engineer, a 19-year old student without a father and without a mentor read this article and -- inspired by it -- took a chance and sent an e-mail to Dr. Davis asking him to be his mentor.

We all get a lot of emails these days, flurries of them it seems. And it's easy sometimes to reply to these politely and curtly and move on or not reply at all. Dr. Davis did neither. He's clearly now committed to striking up a deep and meaningful relationship with this young man and make a difference in this young student's life. [The young man] is from another state and a different part of the country.

And [Dr. Davis] committed publicly to do so and hold himself accountable and report back in a year. He intends to be a real model, not just role model. There is a difference.

Role models can be admired, and through their actions, they can inspire us to dream. But real models have a deeper level of commitment; real models reach out, educate. Engagement is sustained, not episodic.

As the composition of America evolves, our workforce and the pool of students who have yet to discover engineering will change with it and our outreach to inspire and nurture the passion for the engineering discipline must broaden.

I remember reporting to the Naval Academy in 1964. Having grown up in a white, middle-class neighborhood very close to here, my exposure to the sea service, the military and even minorities were very limited.

I connected immediately with a midshipman from the other side of the country from South Carolina, an African American, a man of impeccable character and unflappable temperament. I connected with my good friend and classmate Charlie Bolden.

Some of you may recognize the name. Major General Charlie Bolden retired from the Marine Corps not to long ago and he's also an astronaut.

Charlie and I came from different worlds, but I learned a lot from him. He taught me that anyone given the chance can achieve great things. He did, and I truly believe this.

The Navy gave Charlie a chance, then later the Marine Corps did the same. They provided him the strength of good examples and good leadership. Mentors he could always count on. And that was all he ever needed.

We still try to meet those needs for a new generation of young men and women. We try to remember that someone, somewhere along the way took us by the hand and exposed us to our hidden dreams; introduced us to our hidden potential.

The Navy-wide mentoring program that we have in place now is all about developing our next generation of leaders. I'm recruiting and rating right now the admirals and master chiefs for the year 2037.

To find these leaders, these new faces of engineering, we need to reach young people in fourth or fifth grade which means we also need to reach their parents, teachers, their coaches, their mentors.

We also need your help. We need to leverage the power of organizations like this Engineers' Council to spark the desire to learn at an early age.

My vision for the Navy is maintaining a global technology edge for the warfighter; to do that I need a strong base of naval scientists and engineers.

To do that I've got to find them, inspire them, recruit them and train them. I know that you know a lot about how to do that.

The Navy has a rich heritage of technical innovation. We're very proud of that. We value our engineers. We need engineers, and we need your ideas about how to grow and keep them.

Earlier this month, while visiting a high school in Dallas, President Bush addressed a class in the science and engineering program.

He encouraged scientists, chemists, and physicists to likewise visit classrooms and promote their career fields so as a nation we can remain competitive.

It's important for the Navy and the aerospace and defense industry to be part of this outreach, and it is without question an issue of national security. It is how America will keep the pace with the enormous unrelenting change in this new and dangerous era in which we live.

The Navy is a technology-intensive service, and as we transform our fleet to better meet future challenges our appetite for such experts will continue to grow.

Tomorrow's more complex fleet will require highly educated and versatile Sailors, who are just as comfortable operating a nuclear power plant as they are conducting research or leading troops in the air, at sea or ashore.

Officers like Commander Dave Adams, a nuclear trained submariner. Dave, a Mechanical Engineer from the University of Texas, graduated from our nuclear training program. He later went on to conduct vital research on the Navy's Rail Gun project at the Naval Postgraduate School, research continued by the Navy today.

Just last October, engineers sponsored by the Office of Naval Research fired a small projectile using power plant capable of delivering up to eight megajoules of muzzle energy.

For those of you who don't know what a megajoule is -- and most of my classmates from high school would not -- that's a lot of energy.

This rail gun represents a game-changer in future weaponry, just like Dave represents the caliber of Sailor we need to recruit today to lead the Navy tomorrow.

I should add here that Dave just recently left my staff to go to command one of the Navy's labs conventional reconstruction teams in Afghanistan for the next year before he goes back to sea.

He would no doubt cringe to know I have singled him out. But he's a classic example of the versatility and creativity of the people in uniforms today -- engineers or not.

Classic engineering and nuclear power are not our only technical fields, of course. Naval aviation, likewise, demands technically savvy individuals to maintain and fly our aircraft.

Some of them really get into the engineering aspect of flight and like Charlie Bolden, go on to become test pilots and astronauts.

Astronauts like Alan Shepard and Neil Armstrong, who both took giant leaps for mankind and like Shuttle Pilots Michael Smith and William McCool, who gave their lives in the pursuit of science while piloting Challenger and Columbia, are all naval aviators who truly reached for the stars.

We also have some real down-to-earth engineers out there, on the ground, all over the world serving as a force for good.

Our Naval Construction Battalions, or Seabees as they are more commonly known, are literally on the forefront in the war on terror.

They build schools, hospitals, the infrastructure to enable the blossoming of a democratic government and in the process, they are winning the hearts and minds of those who would otherwise do us harm.

They support equally as well our United States Marine Corps on the ground.

I visited with them not to long ago building a base camp out in the middle of western Iraq -- not a stone's throw from the Syrian border.

They knew how critical that facility will one day be to protecting the western approaches of Iraq and from the flow of insurgents and weapons of war. They were out there constructing spaces, office spaces and housing units on sand so soft and so thick you think you were walking on powered sugar. But the challenge of it only seemed to fire them up more -- classic Seabee spirit.

These are real engineers, part of our staff corps with civil, mechanical, electrical, and architectural degrees.

Over Christmas I visited the Middle East and I can tell you our Sailors and Marines and Soldiers and Airmen and Coast Guard men are doing remarkable work.

And all of us this evening should be mindful of the thousands and thousands of young men and women who are serving overseas in the war front, protecting the things that make us so great as a country. Please keep them in your thoughts and prayers.

Each one of these individuals I met expressed confidence in their skills and their ability to accomplish the mission.

As I conclude I will tell you that I believe in the power and the genius of American industry and its engineers, of our people and of those men and women who serve in uniform today.
Here, tonight, we need your ideas. We need your innovations, and we need us to work together to expand the base of scientists and engineers.

Mentoring is key; everyone has a role. I know our Navy and our nation can continue to count on you.

Congratulations to all the winners tonight. Thanks for all you do to make our country great. It's been great being with you. Thank you.