

**DARPA Tech, DARPA's 25<sup>th</sup> Systems and Technology Symposium  
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**Anaheim, California**

**Teleprompter Script for Dr. Brian Pierce, Deputy Director, Strategic  
Technology Office – Networks Presentations**

STO's Networks and Warfighter Technologies Enable the Strategic  
Spear

» **BRIAN PIERCE:**

Dave Honey's lead-off talks in our two sessions today painted a vivid picture of the challenges of our new strategic environment and of the transformational role of networks in enabling our COCOMs to meet them.

At STO, our mission is to develop the technologies that will enable U.S. Combatant Commanders to be strategically dominant in tactical environments, theater-wide.

DARPA has been at the forefront of countering threats to our nation's security since it was created by President Eisenhower in 1958.

In those early days of the Cold War, strategic threats arose primarily from concerns that occupied the President over two issues:

The Soviet Union's compliance with the limited nuclear weapons test ban treaty and the defense of our nation against Intercontinental Ballistic Missiles.

DARPA responded to these threats on many technological fronts, for example:

Project VELA provided the means for the United States to persistently detect and globally geo-locate explosions from testing nuclear weapons – and Project DEFENDER enabled us to envision a defense against ballistic missiles.

These projects led DARPA to create entirely new, breakthrough technologies – steerable phased-array radars that provide the backbone of today’s missile and air defenses and precursors of the space systems we rely on today for world-wide ISR.

Like the strategic environment at the outset of the Cold War, the challenges we face today are almost wholly new and unanticipated – yet they present a far different set of issues.

More challenges await us in the uncertain future.

Strategic operations now combine global awareness with highly local effects.

Strategic weapons systems are not just precision-guided missiles and munitions, but also highly trained Special Operations Forces.

Today’s strategy must focus on winning the peace, not merely winning the war.

During the Cold War – the era of Projects VELA and DEFENDER – our defense needs were dominated by concerns over *traditional* warfare conducted by nation-states with regular military forces and well-defined weapons systems.

For 2007 and beyond,

our strategic environment contains many new possibilities, including:

- \* **Irregular warfare** – carried out by state and non-state actors via unconventional methods against a vastly stronger United States;
- \* **Catastrophic warfare** – involving the use of weapons of mass destruction by terrorists or rogue states in an effort to decimate U.S. interests.
- \* **Disruptive warfare** – involving the use by disruptive technologies or methods that neutralize U.S. advantages.

What makes these forms of warfare different?

Today a group –  
or even an individual – located almost anywhere on earth can threaten our nation's security.

Consequently,  
today we must be able to counter these  
non-traditional threats effectively without diminishing our capability to  
counter the traditional threats that have preoccupied us for more than  
half a century.

As you've heard today, networks are *foundational* –absolutely  
*fundamental*– to STO's work to provide the technology tools tomorrow's  
warfighters will need to deal with this new strategic environment.

They must facilitate the flow of information on very rapid local  
timescales so that our military forces  
can *Observe-Orient-Decide-Act* faster than our adversaries.

And they must deliver to the warfighter the information he requires to

bring those technologies to bear with precision.

STO presentations today highlighted on-going initiatives that are addressing critical military needs:

wireless mobile networks for local operations ... fiber optic networks for global operations ...

and technologies that provide the critical bridge between local and global communications.

No less important to our warfighters is assuring both the *use* of these networks *and* the information that flows through them.

And so you heard today about STO's efforts in information assurance.

Networks underpin STO's work on the war-fighting technologies my colleagues reviewed for you – technologies to render the battlespace transparent to our warfighters – despite dust and haze, concealment and hardening.

Technologies to track and map the location of weapons of mass destruction.

Technologies to keep us dominant in the maritime environment even as strategic imperatives compel us to operate closer to hostile shores.

Technologies to empower our soldiers on the ground, and to provide them with less burdensome, more abundant, more reliable energy to support their combat needs.

But STO's work goes even beyond this into unfamiliar operating areas – as it must, since our new strategic environment can be counted on to present us precisely what we least expect.

Today the Middle East and Asia –  
areas of responsibility for the Central and Pacific Commands --  
have overtaken Europe as the focus of our security concerns.

The recent announcement of a new combatant command -- AFRICOM  
– suggests a continuation of this shifting trend.

We think big at STO, but it's usually the little pieces that make all the  
difference –  
the little connections, bridges of thought, and leaps of imagination that  
only you can supply.

So stop by and introduce yourself ...  
so we can work together as partners in the defense of our country.

Thank you all, and enjoy the rest of DARPA Tech.