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**Teleprompter Script for Dr. Brian Pierce, Program Manager, Virtual
Space Office**

Outmaneuvering Surprise in Space

» **BRIAN PIERCE:**

My colleagues have outlined great challenges we face in this work – and great opportunities that lay beyond these obstacles in the frontiers of space.

So instead of simply reprising their discussions about how to enhance our nation's warfighting capabilities from space, let me stress the urgency of this moment.

In his introduction,
Dr. Walker mentioned the January 2001 report of the U.S. Space Commission.

The Commission found that *"The U.S. is more dependent on space than any other nation..."* –

and we see the truth of that statement every day in our combat operations in such distant theaters as Iraq and Afghanistan.

But the Commission went on to warn that
*"The U.S. is an attractive candidate for a
'Space Pearl Harbor'"* and that *"We are on notice..."*

but we have not noticed..."

The Commission called for DARPA to get back into space: *“...to undertake development and demonstration of innovative space technologies and systems for dedicated military missions....”*

On January 11, 2007,
the world was jolted to notice what DARPA has been addressing for the last six years.

Aviation Week and
Space Technology reported the details:
A Chinese weather satellite launched in 1999 was attacked and destroyed by an ASAT or “anti-satellite” interceptor launched from or near the Xichang Space Center.

The blast created a debris field that added thousands more fragments of “space junk” orbiting the earth – debris that could threaten the safety of any object near the orbit of the former Chinese satellite.

More ominously,
as the Washington Post pointed out, China’s destruction of this satellite vividly demonstrated the vulnerability of space assets – the satellites that our military relies on for navigation, communications and sensing.

Obliterates ... attacks ... destroys:

Words like these
demand our attention.

There is no longer any excuse not to notice.

Of course, this is hardly the first time DARPA has been called upon to handle the urgent security threats of the moment.

In fact, DARPA was formed in direct response to the growing threat to American security following the Soviet Union's successful launch of Sputnik in 1957.

Events worked out pretty well in that case ...
but it took all the genius and creativity of our country to overcome the danger.

We need that same spirit today – and the same qualities of daring and ingenuity that ensure our success.

As you heard in the preceding talks, DARPA is ready to meet head-on the challenges to national security underscored by that single event 7 months ago.

And our interests are focused on developing space capabilities that are flexible, responsive and adaptable to the changing threats arising in space.

We believe success in four main areas will determine the fate of our nation's capabilities in space.

Let me mention them again briefly through the lens of the Chinese ASAT test:

The first area we call Access and Infrastructure....

We need flexible space system architectures that outmaneuver and outsmart threats.

The second area is Space Situational Awareness....

We must be able to discover, identify and characterize any and all

threats before they can threaten us.

The third area is
Space Protection....

Our space-based military assets must be resilient – with the ultimate goal of making enemy attacks futile.

The final area is
Space Support for the Warfighter....

We must guarantee robust navigation, communications, and sensing systems that are immune to disruptions.

A key element in securing this goal is to move our space-based systems out of harm's way – such as adjusting their orbits – while preserving how they guide us and allow us to communicate and see ... anywhere and anytime.

When it comes to space, DARPA's call to arms in 1958 resonates just as strongly today:

"We cannot continue to follow the usual 'safe,' conservative and critical line of approach, which leads to a slow 'safe' and conventional course to progress."

Our predecessors understood that
timidity in thought... reluctance in imagination...
and caution in pursuing "state-of-the-art" change ultimately places our national security at risk.

Today, more than ever, DARPA is in need of imaginative thought and advanced "state-of-the-art" change for the assured use of space.

DARPA has repeatedly made what was once considered impossible the new, dominant paradigm ...the Saturn V rocket engines that lifted man to the Moon
...or on-demand
geo-location anywhere on the face of the Earth.

We need fresh ideas to keep on doing the impossible in space.

And that, as always,
is where you come in.

For my part,
I've been to many DARPA conferences, but not often on this side of the podium.

And since coming inside DARPA from industry,
I've learned a few things that I wish I'd known when I was in the audience.

We call the folks you've heard from today DARPA Program Managers –
but they're really
Program Creators.

They are project entrepreneurs
for the DoD.

They want your ideas ... they await your input.

They don't arrive at DARPA with a blank slate, but they don't arrive with tablets carved in stone either.

Their overriding goal –
in the short time they have at DARPA –

is to make an impact.

They're motivated to makes things happen.

So here's my advice,
as someone who often stood in your place:

Don't sit back and try to perfect your ideas before coming to DARPA.

Call our Program Managers ...

email them ... visit them... go to see them in our booths here today.

If you have good ideas to offer, we want to hear them – and, in the end, those ideas might prove essential to the security of our nation.

Over the last 50 years, we've seen the complexity of space explode – from a single Sputnik spacecraft orbiting the earth in 1957, to hundreds of satellites today that circle in different orbits on a wide range of missions.

DARPA stands ready to tackle the myriad unknown challenges that will confront us over the next 50 years.

Thank you.