



RESEARCH
AND ENGINEERING

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The Department of Defense Is Placing a Big Bet on Big Data

March 29th Event hosted by the White House Office of Science and Technology Policy

“The Department of Defense is placing a Big Bet on Big Data” was the theme of my presentation at today’s panel hosted by the White House Office of Science and Technology Policy to launch the Administration’s new “Big Data” research and development initiative.

We intend to change the game and plan to be the first to leverage big data across the full scope of military operations in new and unconventional ways. For example,

- We are within sight of a new generation of systems that understand and interpret the real world with computer speed, computer precision and human agility. These systems will be central to helping our commanders and analysts make sense of the huge volumes of data our military sensors collect at speeds 100X faster than today.
- We also see a revolution emerging in data analytics and prognosis that has the potential to bring together sensing, perception and decision support in new ways that will result in truly autonomous systems that go well beyond tethered joysticks. These systems will be agile, they will maneuver and understand their environment, they will make decisions by themselves, and also know when to call upon a human.

These visions are not empty fantasy.....they are being made possible through big bets the Department is making on Big Data.

The department’s Big Data projects represent an approximately \$250M annual investment in projects across the data to decisions, autonomy, and human systems areas:

- Data to decisions investments will develop computational techniques and software tools for analyzing large volumes of data, both semi-structured (e.g., tabular, relational, categorical, meta-data) and unstructured (e.g., text documents, message traffic) linked to dynamic reasoning and inference engines that can learn from experience with little training and within mission timeframes.
- Autonomy investments will leverage advancements in data to decisions to develop support tools that can recognize trends, adapt to real world conditions and succeed in complex, dynamic environments without relying on human intervention.

- Human systems investments will advance human - machine interfaces to enable seamless collaboration for operations and for training.

The generation of new ideas and accelerated progress, across a broad range of new performers, is critical to success in dealing with Big Data. As projects finish, new starts to continue progress are launched. There are currently more than 20 open solicitations to support the Big Data initiative. Information about solicitations can be found on the DefenseInnovationMarketplace.mil, a new website created to better communicate DoD investment priorities with performers in industry and academia.

The Department of Defense is placing a Big Bet on Big Data. Help us reach our visions by submitting your ideas to the solicitations.



Zachary J. Lemnios