

**DEFENSE INNOVATION BOARD**  
**Open Meeting Minutes**  
**July 10, 2019**  
**09:37AM to 11:26AM**  
**DIU, Mountain View, CA**

The Defense Innovation Board (DIB) is a federal advisory committee within the Department of Defense (DoD) operating pursuant to the Federal Advisory Committee Act of 1972, the Government in Sunshine Act of 1976, and other appropriate federal regulations. The DIB meets quarterly and held its twelfth public session on July 10, 2019 from 09:37AM to 11:26AM in the auditorium of the DIU, Mountain View, CA.

**DIB Members (voting) (10)**

Daniela Rus  
Eric Schmidt  
Jen Pahlka  
Kurt Delbene  
Michael Mcquade  
Milo Medin  
Richard Murray  
Mark Sirangelo  
Neil deGrasse Tyson  
Missy Cummings

**DIB Staff Support (non-voting) (8)**

Mr. Joshua Marcuse, Executive Director  
Maj Travis Sheets, Designated Federal Officer  
Ms. Schuyler Moore  
Ms. Courtney Greenley  
Mr. Aaron Schumacher  
Ms. Chenny Zhang  
Ms. Erin Bugg  
Ms. Colleen Laughlin

**Guest Presenters (1)**

Dr. Michael Zatman, Assistant Director,  
Research and Engineering, FNC3

**Public Commenters (3)**

Mr. Joseph Arora  
CAPT Richard Arthur (Ret)  
Mr. Tim Hickey

# DEFENSE INNOVATION BOARD

## PUBLIC MEETING SESSION

### Opening Remarks

- Administration & Compliance – Designated Federal Officer
- Introduction & Agenda Review – Executive Director
- Opening Remarks – Board Chair

### Jen Pehlka - Workforce, Behavior, and Culture (WBC) Subcommittee Update

Good morning. It is my pleasure to share an update from the Workforce, Behavior, and Culture Subcommittee on one of our newest initiatives.

Our focus right now is a review of our draft Recommendation 14 on how we might better support our internal talent. We are calling this effort “Workforce Now.”

- Background Context/Intro:

Over the past three years, we’ve heard stories from senior leaders expressing frustration about filling critical digital technology needs, and heard stories from highly qualified military personnel eager to fill these gaps. While more systemic changes to our personnel system must be considered, “Workforce Now” focuses on solutions that can be implemented immediately. We are still in the early stages of investigation, and for the first step, we’ve decided to focus on active duty service members.

- Problem Description:

Our current talent management structure does many things right, but it is not optimized to take advantage of the unique skills and talents of our service members, especially when it comes to digital technologies.

- What We Hope To Accomplish & Timing:

So what are our next steps? We plan to continue interviews and feedback sessions with the goal of having a clear, actionable recommendation for the Board to consider and vote on at our next public meeting in October. We are also asking for your help.

- Help Requested:

We want to talk to the right people within this space and are expanding our network of key partners as we refine the problem and explore solutions.

Please reach out to the Defense Innovation Board staff through our website if you have suggestions

### Eric Schmidt - Thank you to the WBC Subcommittee

- Next, Milo, please provide a recap of the ongoing projects led by DIB’s Science & Technology Subcommittee

### Milo Medin – Presented Science and Technology (S&T) Subcommittee Update

- Zero Trust (to be discussed at length shortly)
- Battle Network (closed event held tomorrow, ongoing efforts to write recommendations)
- Joint Pathology Center (led by Dr. Eric Lander, working to digitize the significant tissue sample repository housed at JPC)

## DEFENSE INNOVATION BOARD

Josh Marcuse – Introduces Dr. Zatman for presentation on FNC3

- We are honored to have Dr. Michael Zatman, Assistant Director of Networked C3 for the Under Secretary of Defense for Research & Engineering, with us today to provide some remarks on Networked C3.
- Dr. Zatman has been given the weighty task of thinking through DoD future network design, to maximize data transfer speed and throughput between a diverse set of endpoints while minimizing latency to increase resiliency and lethality at the tactical edge. He is also working closely with the DIB on our Battle Network efforts, which include a closed information-collection session tomorrow with senior DoD leadership and commercial network solution providers.
- Please join me in welcoming Dr. Zatman.

Dr. Zatman Presentation on FNC3

Josh Marcuse

- Thank you, Dr. Zatman, for the fascinating presentation.
- Now, we have the honor to hear from Kurt DelBene to lead the Board's discussion of its Zero Trust Paper.

Kurt Delbene – Presentation and Deliberation on Zero Trust Paper

- This paper allows us to combine our previous work on SWAP with our ongoing efforts in the battle network space
  - Reasons for writing this paper: educate DoD/provide common zero trust terminology for DoD, including a CLASS supplement looking at DoD existing network vulnerabilities and ongoing DoD efforts to implement zero trust principle
  - Explanation of two sections of zero trust paper: UNCLASS (completed, to be deliberated and voted on now) and CLASS (in progress, likely deliberated and voted on at October public meeting)
  - Overview of zero trust principles/architecture
  - Overview of zero trust relevance to/implications for DoD
  - Prompt Board members to deliberate on content of report

Eric Schmidt – Lead Vote on Zero Trust Paper

- Call for a vote on the paper, asking DIB members for yay, nay, abstentions

Josh Marcuse - Confirms tally and announces results

- Vote was tallied 10 yes/favor, 0 No

Michael McQuade – Provided observations and deliberation on AI principles project

- Recap of the AI Principles Project so far
- Data gathering sessions at Harvard, Carnegie Mellon, and Stanford
- Data gathering sessions with DoD leaders and key stakeholders
- High-level themes that have emerged from these consultations
- Offer other Board Members to provide observations

Josh Marcuse – Provided Implementation by the Department and SWAP Update

## DEFENSE INNOVATION BOARD

- Recommendation 1: Increase Workforce Innovation Capacity
- Recommendation 2: Embed Computer Science as a Core Competency in DOD
- Recommendation 4: Assess Cyber Security Vulnerabilities in Advance Systems
- Recommendation 5: Catalyze Innovation in Artificial Intelligence and Machine Learning
- Recommendation 6: Acquisition Innovation
- Recommendation 7: Expand New Approaches to Innovation
- Recommendation 11: Increase Bureaucracy Busting Activities

Josh Marcuse - Moderated Public Comments (2 minutes per presenter)

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**PUBLIC COMMENTS**

Mr. Joseph Arora

For the AF to address Networked C3, AFWERX used its commercial crowdsourcing process to source over 300 proposals to address these issues. From the 300 we've down selected to 60 who will showcase their tech to the joint shareholders Jul 23-24 in Vegas. After the main event in a couple weeks, the Air Force is going to put some of these companies on contract to prototype C3 solutions. To address the workforce behavior and culture piece we need to hold the system owners accountable to developing systems that work. It can't take months to transition/move positions. The DOD can do better than averaging 60 day to pay their people.

CAPT Richard Arthur, USN (Ret)

For Jen Pahlka – look to the military reserve communities to increase staffing capabilities to JAIC and others. Hard to change career risk factors in active duty... probably easier to make reserves more attractive to tech/creative community. For example, I'm a TV writer, but now an active duty to help manage on AI project at China Lake. For Michael McQuade – Consider, ROE for autonomous vehicles. Where threshold for self-defense reactions to be invoked.

Mr. Tim Hickey

Hi, thank you for this opportunity. I have been working with oracle for 18yrs and DOD for 4yrs, across agencies and Army personnel/payroll programs. I have seen a huge amount of data duplication. I think the DOD needs to look at more Blockchain technology as a data brokerage layer so the DOD can maintain trusted and verified record sets like a soldier, airmen, sailor or other smart contracts for data sharing. Thank you, Tim Hickey.

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Dr. Schmidt made closing comments and Mr. Marcuse concluded the meeting with concurrence from the DFO.

END OF PUBLIC SESSION

ADJOURNMENT

DEFENSE INNOVATION BOARD

Mr. Marcuse, with the concurrence of the DFO, adjourned the DIB's July 10, 2019 public meeting session at 11:26 AM.

I hereby certify, to the best of my knowledge, the foregoing minutes are accurate and complete.

Eric Schmidt, Ph.D.  
Chairman, Defense Innovation Board

## DEFENSE INNOVATION BOARD

### MEETING ATTENDEES:

Adams	Audrey
Aman	Adhanom
Anderson	Eric
Andre	Louis
Armijo	Jeff
Arora	Joseph
Arthur	Richard
Aubley	Curt
Barnes	Richard
barnes	dave
Begole	James
Berce	Kevin
Bio	Ernie
Bloch	David
Capostagno	Daniel
Chan	Richard
Cross	James
Dawson	Kimberly
Dawson	Glenn
Decker	Rebecca
Decker	Jeff
Dixon	Peter
Doug	Drakeley
Douglas	Drakeley
Dukhovny	Dimitry
Durski	Kristopher
Edwards	Jamal
Ferguson	Michael
Finkle	Ned
Foster	Guy
Galy	Chris
Ganfina	Brice
Ganfina	Brice
Grandsaert	Patrick
Grandsaert	Patrick
Grider	Casey
Gupta	Sambhav
Hartwig	Edward
Hickey	Tim
Holliday	Maynard

Holmqvist	Karl
Jaghori	AJ
Jayson	Elyse
Jordan	Wall
Kahl	Colin
Kleinman	Michael
kothari	kunal
Lady	Rocket
Leslie	Adam
Liu	Fang
Love	Joshua
Lozada	Jason
Mansori	Ikram
Marriott	Emma
Mary	Khatchatrian
Mermel	Craig
Metkowski	Gustav
Millick	Sujata
Moore	Travis
Moran	J Christopher
Norlander	Arne
Olney	Rachel
Patel	Nirav
Penta	Michael
Pham	Theresa
Pilipiszyn	Ashley
Poynton	Aaron
Price	Hunter
Price	Lori
Pugalia	Anu
Quach	Rocky
Raghu	Maithra
Raiklin	Ivan
Romani	Marco
rotter	brad
rotter	brad
Schoos	Jeremy
Selby	Jaelyn
Selig	Justin
Shah	Raj
Steelman	Brandon
Stillman	Ethan
Svitek	Tomas
Sweeney	Will
Taylor	David

DEFENSE INNOVATION BOARD

Tony	Damian
Travis	Burton
Wallace	Samuel
Wang	Benjamin
Wang-Levine	Adam
Weinberg	Zoe
Witkowski	Mary
Wright	Melissa
Wright	Melissa
Young	Jessica
Zhou	Cecilia