Investigating the DNA of the Systems Engineering Workforce

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The Helix Project

- Helix is a multi-year longitudinal study designed to build an understanding of the systems engineering workforce in the U.S. Department of Defense (DoD) and the Defense Industrial Base (DIB)
- Helix is focusing on three main research questions:
  1. What are the characteristics of systems engineers?
  2. How effective are systems engineers and why?
  3. What are employers doing to improve the effectiveness of their systems engineers?
- Data collection is primarily through face-to-face, semi-structured interviews with systems engineers
- Reporting is done in an aggregated anonymous manner that does not reveal the identities of participating individuals or organizations

Systems Engineers Interviewed in 2013

- In 2013, the Helix team interviewed 110 systems engineers from 7 organizations

Initial Findings

- Qualitative and quantitative research methods were applied on the interview data, based on a modified grounded-theory approach

Future Plans

- To interview non-systems engineers and others who interact with systems engineers
- To interview individual systems engineers not currently affiliated with an organization
- To analyze INCOSE certification applications and information from DoD’s Data Mart, to obtain further insights into demographics and career paths of systems engineers
- To expand scope, to include commercial organizations and other countries

Contact

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