iFAB Foundry / FANG Proposers' Day

November 10, 2011

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Proposers' Day – agenda

Introduction and logistics	**LTC Nathan Wiedenman**
DARPA and TTO Overview	Mr. Barry Ives
Adaptive Vehicle Make Overview	LTC Nathan Wiedenman
iFAB Foundry Solicitation Details	LTC Nathan Wiedenman
iFAB Foundry Q&A	LTC Nathan Wiedenman
FANG Solicitation Details	LTC Nathan Wiedenman
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General Q&A Session	LTC Nathan Wiedenman Mr. Chris Glista

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Proposers' Day – Admin

- Webcast
  - DARPA will monitor questions in the chat room
  - Questions may also be e-mailed in real time
    - iFAB: DARPA-SN-12-07@darpa.mil
    - FANG: DARPA-SN-12-08@darpa.mil
  - The webcast will be recorded and will be available for playback
    - Playback site access instructions will be e-mailed to all registered attendees
    - Link to the playback will be posted on FedBizOpps along with the final BAAs

- Presentations will be available at DARPA AVM website:
  - http://www.darpa.mil/Our_Work/TTO/Programs/Adaptive_Vehicle_Make_(AVM).aspx

- We are discussing draft solicitations during a comment period – language in final solicitations supersedes anything I say today

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DARPA TTO Overview

Mr. Barry Ives, Deputy Director
Tactical Technology Office

November 10, 2011

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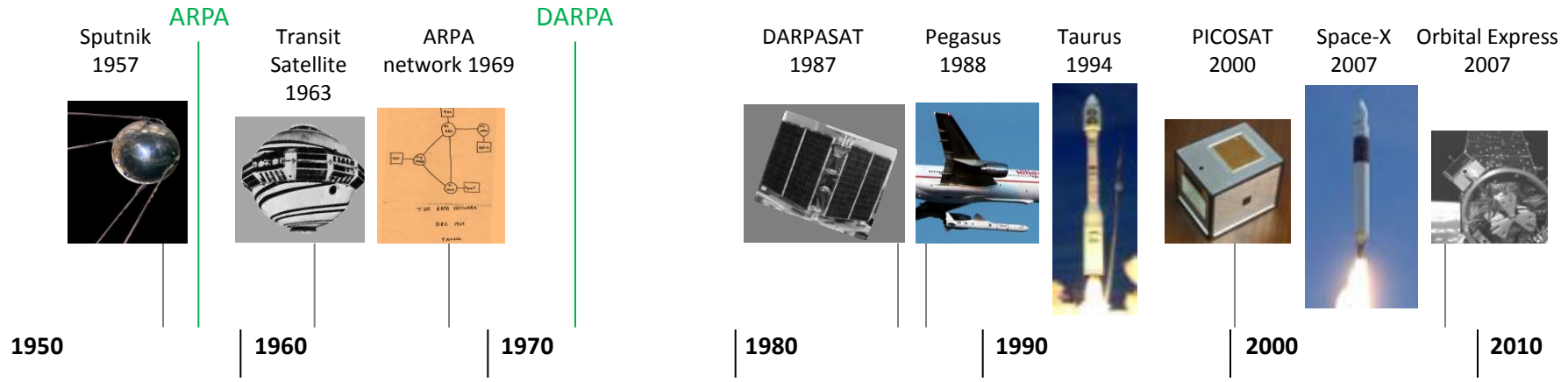
Who is DARPA?

In 1958, Advanced Research Projects Agency
was created to pursue high-risk, high pay-off advanced technology.

In 1972, ARPA was renamed the
Defense Advanced Research Projects Agency.

DARPA breaks the gridlock of military competition for resources and recognition that hindered early U.S. space technology development.

DARPA's progressive, risk-tolerant leadership fostered:
- Cooperation among government agencies.
- Healthy competition in the marketplace.



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Unintended success of high pay-off investment

1955

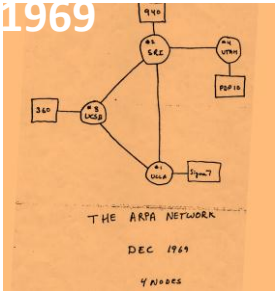
Original F1 engine too complicated for early launch requirements

Moon launch

Four years later developed for heavy-lift manned missions

1967

1969

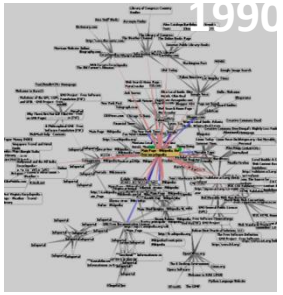


Original ARPAnet for sharing large volumes of lab data

The 'internet'

Unplanned innovation turned it into the world wide web

1990



1963

Transit 2A satellite pioneered doppler navigation for specific military missions

GPS

Became global precision navigation technology for military and civilian use

1999

Navstar Global Positioning System (GPS) satellite Image: USAF Research Laboratory

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Organization

AEO
Adaptive Execution Office

- Agile Programs with Frequent Development Cycles
- Conduct Systematic Rigorous
- Assessments
- Explore New Contracting Approaches
- Develop Strong Relationships

DSO
Defense Sciences Office

- Physical Sciences
- Materials
- Mathematics
- Training & Human Effectiveness
- Biological Warfare Defense
- Biology

I2O
Information Innovation Office

- Global ISR
- Cyber
- Social Networks
- Computational Social Science
- Language Transparency
- Edge Finding
- Training/ Education

MTO
Microsystems Technology Office

- Basic Science Core
- Devices
- Integration
- Power
- Architectures
- Application

STO
Strategic Technology Office

- Comms & Networks
- Global Tactical ISR
- Energy
- Hybrid Warfare
- Extreme Environments

TTO
Tactical Technology Office

- Advanced Weapon Systems
- Advanced Platforms
- Advanced Space Systems

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Tactical Technology Office

Objective

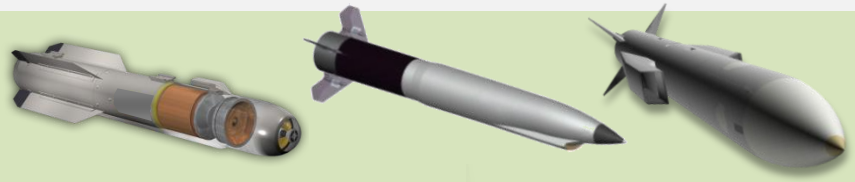
To transform the future of warfighting through high risk, high payoff development of rapid, mobile, and responsive combat performance for advanced weapons, platforms, and space systems.

Goals

- Create highly capable systems that enable "order of magnitude" improvement in military capabilities in a rapidly changing technological landscape.
- Avoid technological surprise in areas of TTO emphasis.
- Develop tactical technologies and systems that enable "game changing" tactics, techniques, and procedures that address the entire spectrum of armed conflict.

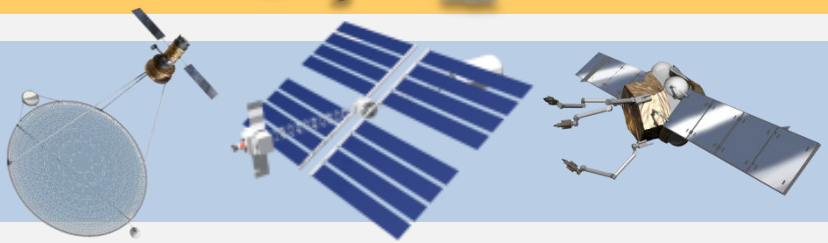
Focus areas

Advanced Weapon Systems
- Precision Strike
- Kinetic / Non-Kinetic Effects
- Responsive Engagement



Advanced Platforms
- Unmanned Systems
- X-Planes
- Manned Systems

Advanced Space Systems
- Resilience in Space Operations
- Assured Space Access
- Stability



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DARPA

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Adaptive Vehicle Make (AVM)

LTC Nathan Wiedenman, Deputy Program Manager
Mr. Paul Eremenko, Program Manager
Tactical Technology Office

November 10, 2011

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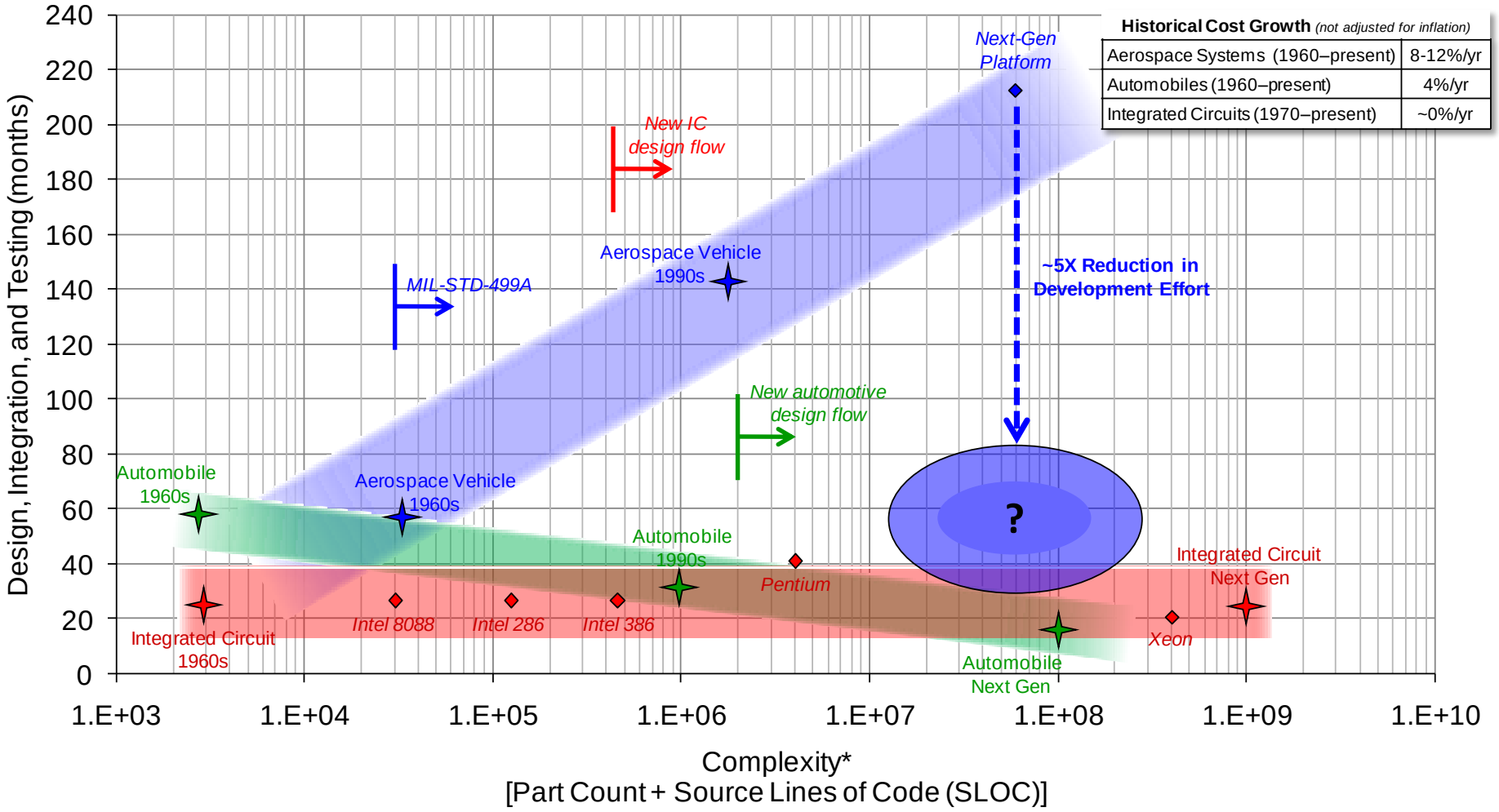
Historical schedule trends with complexity



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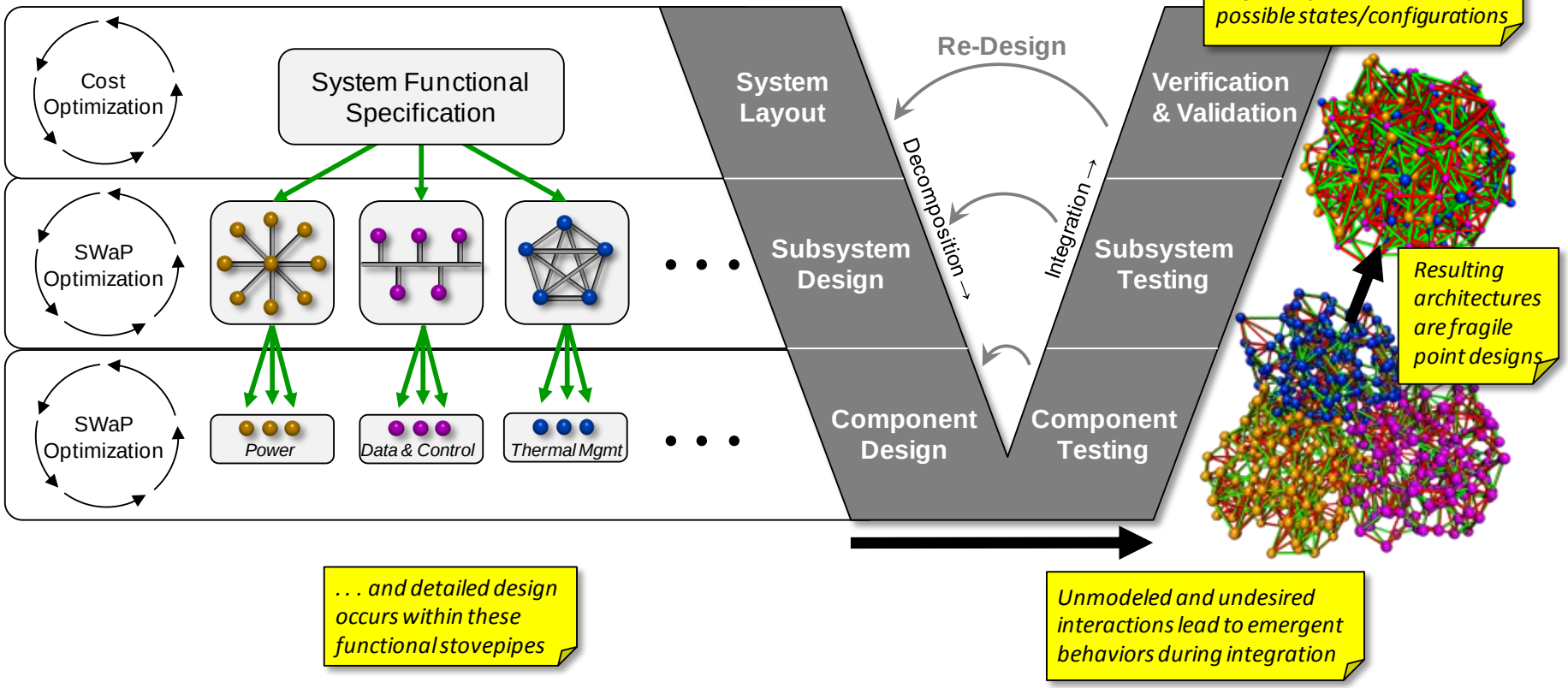
Status quo approach to managing complexity

MIL-STD-499A (1969) systems engineering process: as employed today

SWaP used as a proxy metric for cost, and dis-incentivizes abstraction in design

System decomposed based on arbitrary cleavage lines . . .

Conventional V&V techniques do not scale to highly complex or adaptable systems–with large or infinite numbers of possible states/configurations



Resulting architectures are fragile point designs

. . . and detailed design occurs within these functional stovepipes

Unmodeled and undesired interactions lead to emergent behaviors during integration

SWaP = Size, Weight, and Power
V&V = Verification & Validation

Desirable interactions (data, power, forces & torques)
Undesirable interactions (thermal, vibrations, EMI)

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Adaptive Vehicle Make vision

Shorten development times for complex defense systems [META]

- Raise level of abstraction in design of cyber-electromechanical systems
- Enable correct-by-construction designs through model-based verification
- Compose designs from component model library that characterizes the “seams”
- Rapid requirements trade-offs; optimize for complexity & adaptability, not SWaP

Shift product value chain toward high-value design activities [iFAB]

- Bitstream-configurable foundry-like manufacturing capability for defense systems
- Rapid switch-over between designs with minimal learning curve
- “Mass customization” across product variants and families

Democratize design [FANG]

- Crowd-sourcing infrastructure to enable open-source development of cyber-electromechanical systems [vehicleforge.mil]
- Prize-based Adaptive Make Challenges culminating in an Infantry Fighting Vehicle for testing alongside a program of record [FANG]
- Motivate a new generation of designers and manufacturing innovators [MENTOR]

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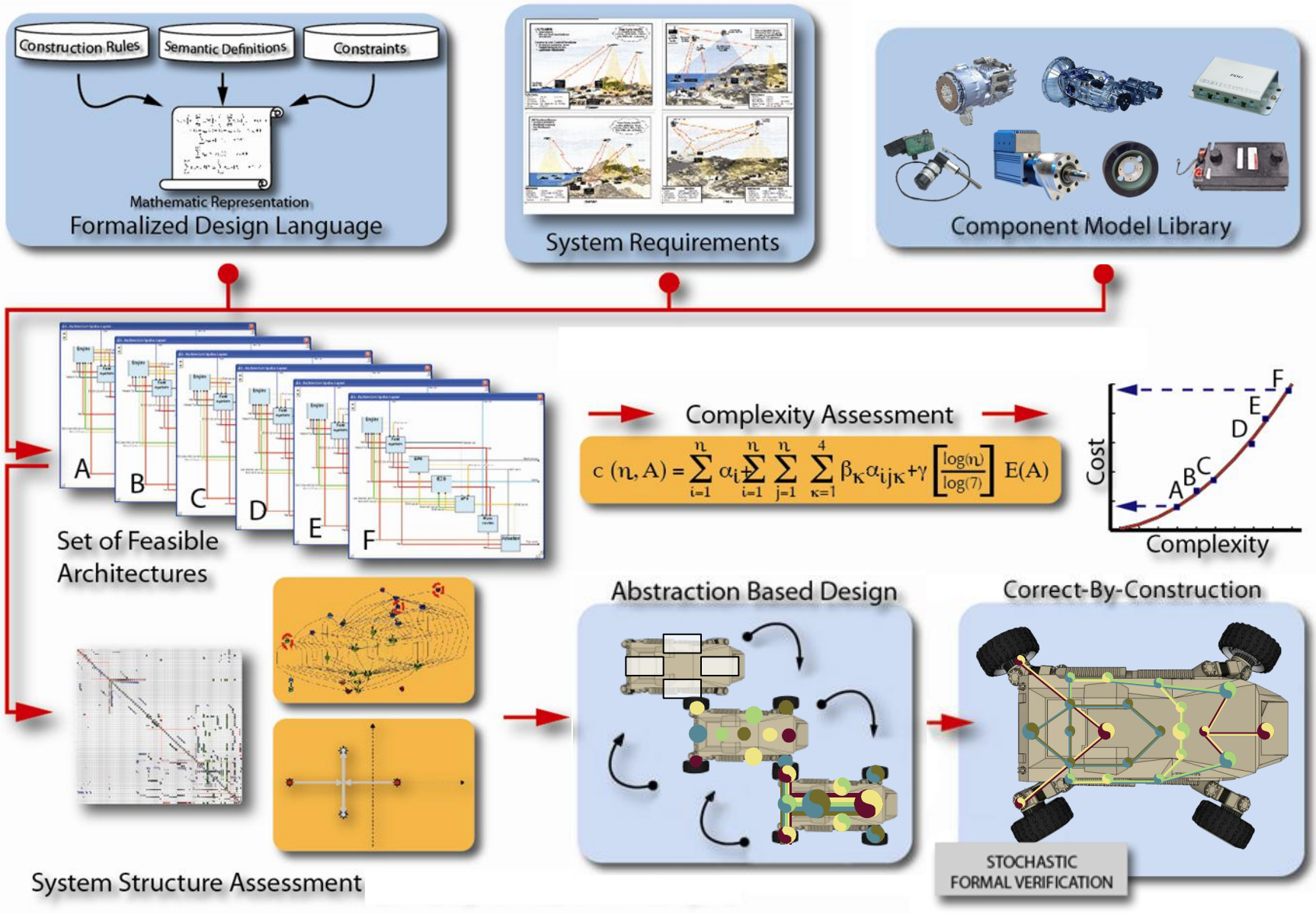
Notional META design flow



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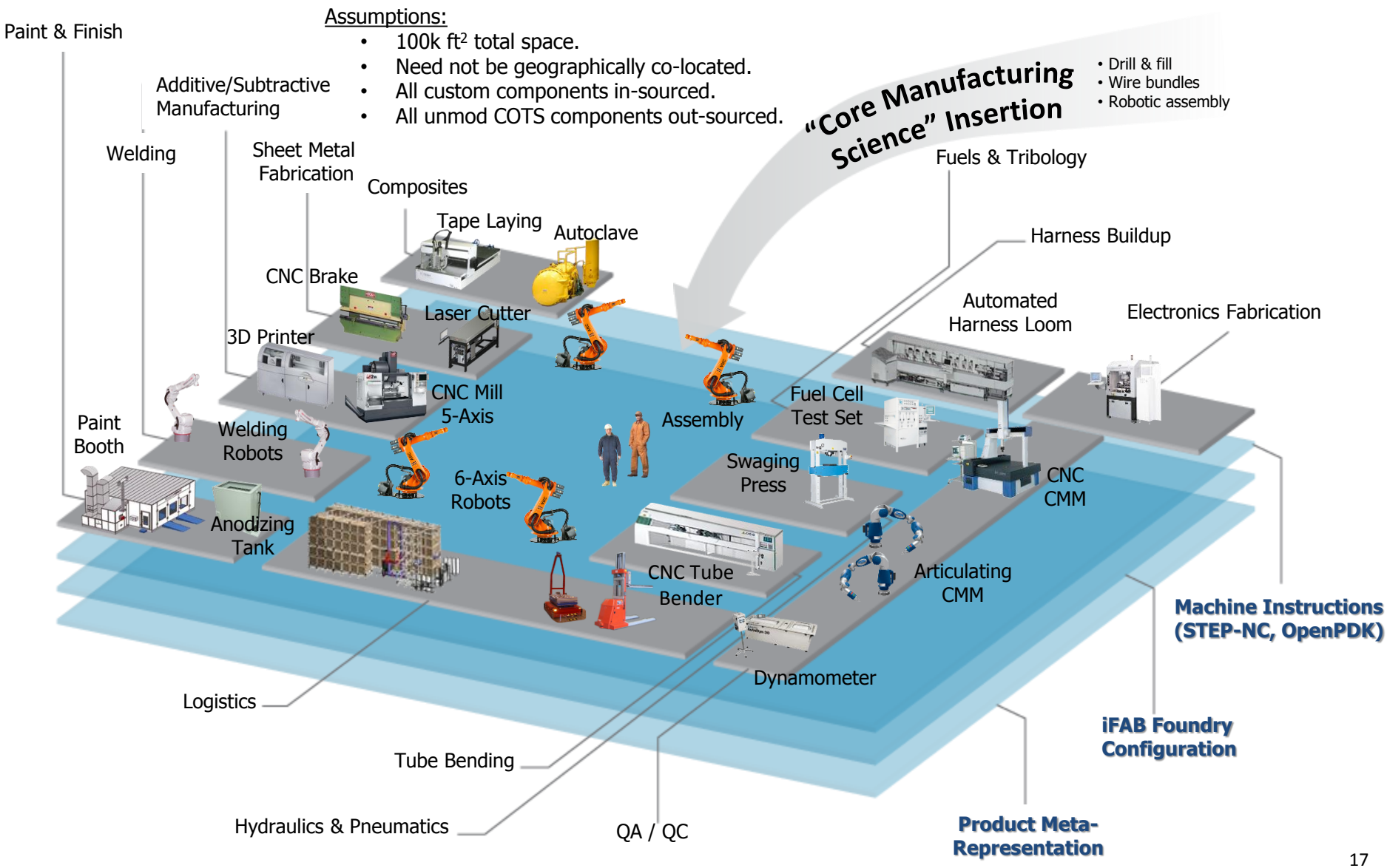
Notional iFAB foundry configuration



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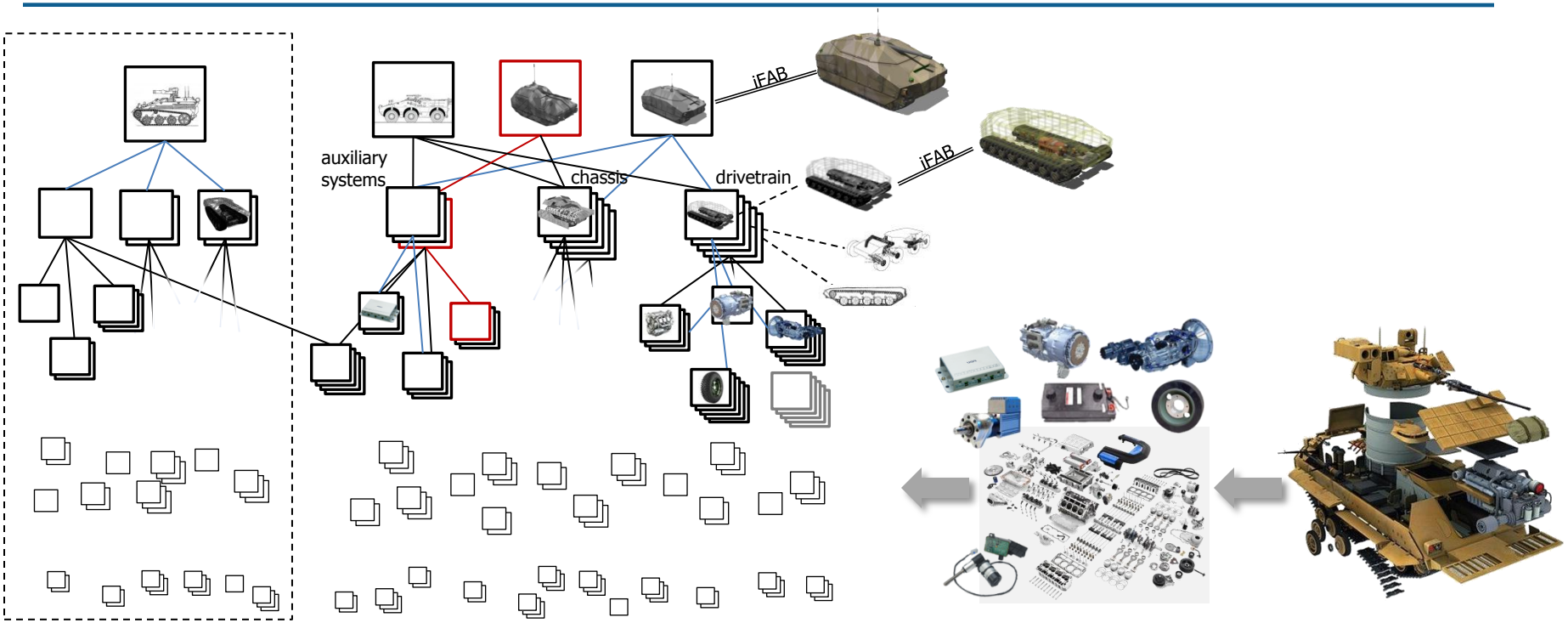
Crowd-sourcing infrastructure: *vehicleforge.mil*



Estimated Size of Component Model Library

Assembly	Unique Parts (upper limit)	Total Parts (lower limit)	Library Parts (unique x 5)
Drivetrain	3,000	8,000	15,000
Chassis/Armor	5,000	12,000	25,000
Other	7,500	10,000	37,500
Total	15,500	30,000	72,500

Note: Estimates are at the numbered part level. Cables and circuit boards counted as single part. Excludes variable mission equipment, software.

Elements of a Component Model

Physical attributes • size and shape • mass properties • elastodynamics	Undesirable emissions • thermal • electro-magnetic • vibrational
Interfaces • data • power • mechanical	Performance • blackbox model • failure modes

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Fast, Adaptable Next-generation Ground vehicle (FANG)

Mobility/Drivetrain Challenge

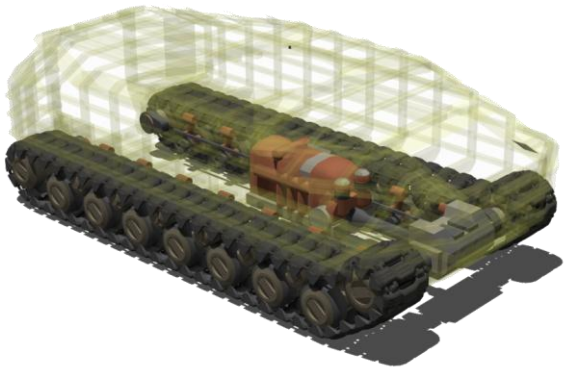
SCOPE
- Vehicle drivetrain to meet IFV speed, efficiency, terrain, reliability objective
- Available model library to include:
  - Hybrid-electric systems
  - Novel ground interfaces

PARTICIPANT POOL
- Global

INCENTIVE
- Prize $1M for winning design
- Winner(s) judged based on multi-objective weighting function

DESIGN AGGREGATION
- Use of META metalanguage required
- Use of vehicleforge.mil optional

BUILD APPROACH
- iFAB foundry build for top design(s)



Chassis/Integrated Survivability Challenge

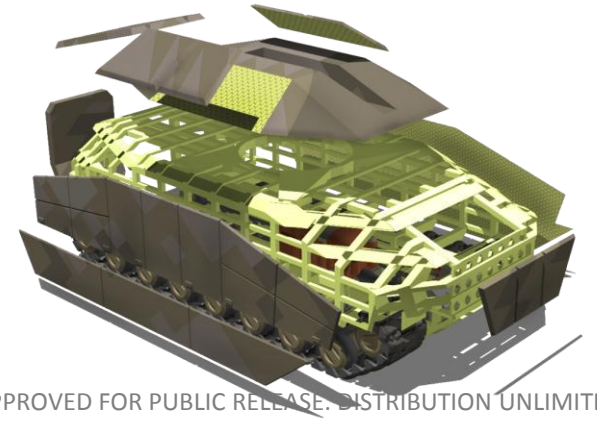
SCOPE
- Chassis and armor design to meet principal IFV-like survivability objectives
- Available model library to include:
  - Advanced armor concepts
  - Novel configs (monocoque, v-hulls)

PARTICIPANT POOL
- Global

INCENTIVE
- Prize $1M for winning design
- Winner(s) judged based on multi-objective weighting function

DESIGN AGGREGATION
- Use of META metalanguage required
- Use of vehicleforge.mil optional

BUILD APPROACH
- iFAB foundry build for top design(s)



Total Platform Challenge

SCOPE
- Complete IFV based on core Army objectives and distilled requirements

PARTICIPANT POOL
- Global

INCENTIVE
- Prize $2M
- Winner judged based on satisfaction of constraints and multi-attribute preference function (i.e., entirely objective approach)

DESIGN AGGREGATION
- Use of META metalanguage required
- Use of vehicleforge.mil optional

BUILD APPROACH
- iFAB foundry build for top design(s)

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Experimental Crowd-derived Combat support Vehicle (XC2V)

Goal

- Experiment in crowd-sourced design
- Militarily-relevant application
- Existing (simple) commercial infrastructure

Approach

- Utilize existing social network of ~20,000 from Local Motors (increased by ~3,000)
- Crowd-source design of a combat support vehicle
- $10k in prizes
- Build in existing micro-factory

Results

- 159 final designs submitted
- 100 of "high caliber" according to DARPA Service Chiefs Fellows
- 4 week design period
- 14 week build period

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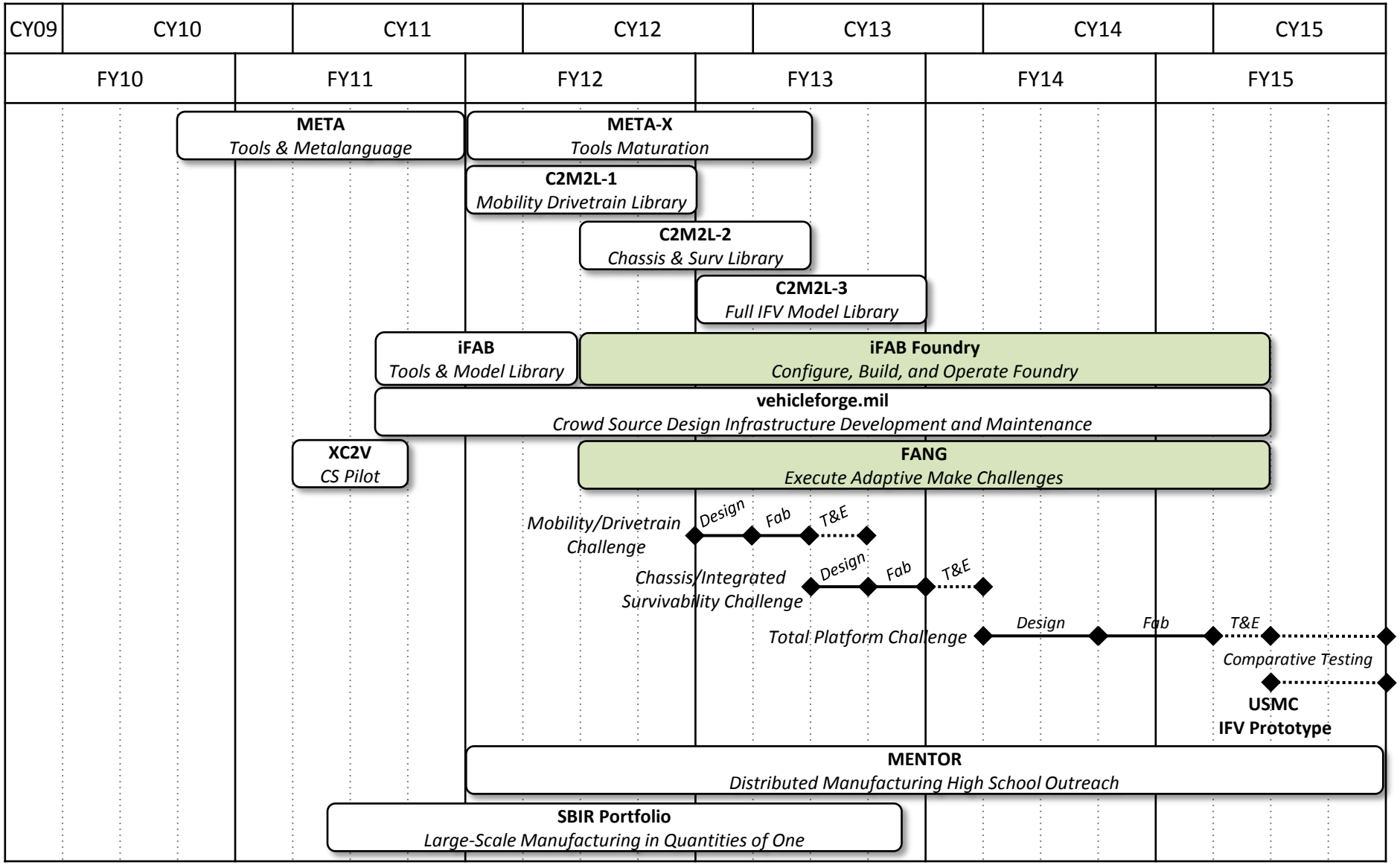
AVM Portfolio Schedule



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Adaptive Vehicle Make performer community

META

Dassault Systèmes	Extension of commercial CATIA/DELMIA PLM suite to enable formal verification
Vanderbilt Univ (Dr. Bapty)	Compositional cross-domain tool-chain analysis templates that support deep domain analysis
Vanderbilt Univ (Dr. Neema)	Rich model-based approaches developed for software and VLSI into the CPS world
Xerox PARC / CyDesign	Function-based framework for co-verification assessment and reasoning at early stages of design

vehicleforge.mil

GE Research/MIT	Custom collaboration site linking to MIT DOME model repository and social network challenge platform
Georgia Tech GTRI	Collaboration site based on open source distributed version control system; teamed with RedHat
Vanderbilt University	Collaboration site derived from KForge software and information forge site platform
Univ of Pennsylvania	Credentialing users and contributions utilizing reputation-based quantitative trust management

iFAB

Boeing/General Motors	Manufacturing capability and process model library with describing foundry resources & human actors
Carnegie Mellon Univ	Distributed agents/process model approach for two-way interface between CAD and CAM systems
Intentional Software	Formal "meta meta" language to enable multi-domain co-design of artifact & manufacturing
Penn State ARL	Agent-based foundry configuration and trade space visualization
Univ of Delaware	Developing compositional cross-domain tool-chain analysis templates for composites manufacturing
Xerox PARC	Rapid construction and search of feasible manufacturability spaces and metrics for such spaces
Georgia Tech GTRC	Creating adaptable software libraries of manufacturing processes pertinent to the fabrication of electro-mechanical components and/or assemblies

MENTOR

Georgia Tech/Dassault	Sophisticated distributed manufacturing front-end based on Dassault CAD, low-cost 3D printer network
O'Reilly Media	Novel approach to assembly of complex 3D shapes from 2D media, use of MAKE Magazine, Maker Faires

Additional award(s) pending

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AVM solicitation and execution philosophy

- Program-wide PI meetings
  - Held bi-monthly in a major U.S. metropolitan area with easy access by air
  - Principal forum for delivery of performer results
  - May be made open to industry/public
- Pre-publication review
  - No pre-publication review on university work performed on campus
- Intellectual Property
  - Unlimited Rights to the Government, except on Commercial Items (requires substantiation)
  - Performer should work to open-source promulgation of software, models, and documentation
  - Above does not apply to third-party technical data or software handled by performer
  - Must protect third-party proprietary information
  - ITAR:
    - Government reviewing status of component models and tech data packages
    - Performer must comply with appropriate regulatory and statutory requirements

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iFAB Foundry

LTC Nathan Wiedenman, Deputy Program Manager
Mr. Paul Eremenko, Program Manager
Tactical Technology Office

November 10, 2011

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iFAB Foundry program overview

- Foundry-style production of military ground vehicles
  - Accept product data package in META format
  - Model based capability
  - Nodal (geographically dispersed) construct
  - Programmable
  - Monitorable

- Produce three FANG Challenge products
  - Mobility/Drivetrain
  - Chassis/Survivability
  - Full Vehicle

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iFAB program scope and structure

- Up to $50.0 million available funding
- One award anticipated
- Proposer must address all seven iFAB BAA Tasks
  - Tasks 5-7 will be repeated three times
- Period of performance – 12 month base from the date of award, two 12 month options; total 36 month effort
- Proposals from entities outside of traditional defense performer base are welcome and encouraged

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iFAB Foundry tasks

- Integrate iFAB information architecture & manufacturing model library
- Establish baseline foundry configuration & business/information network
- Procure and install equipment at final assembly node
- Support manufacturability queries from FANG Challenge participants
- Configure foundry for specific FANG Challenge product design
- Manufacture FANG Challenge product
- Gather QA/QC and metrology data on manufactured product

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Task 1: Integrate iFAB information architecture & manufacturing model library

- Complete and integrate the model-based information architecture
  - supports curation and use of manufacturing model library (MML)
  - decompose META technical data package into feasible processes
  - configure the foundry to support product build
  - determine product manufacturability (real-time, design-space mapping, rules)
  - generate CNC instruction sets and human instructions and training
  - monitor build status
  - determine and capture "as built" properties in near real time
  - implement IA and physical security (proprietary and export-controlled data)

- Completion and integration of manufacturing model library
  - add and update models to represent as-built foundry capability and configuration

- Deliver PDR, CDR and delta-CDRs as architecture evolves to support challenges

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Task 2: Establish baseline foundry configuration & business/information network

- Define baseline configuration to support military ground vehicles
  - Equipment
  - Flows (data, goods, funds/promises)
- Justify proposed baseline configuration
- Clearly explain locations and arrangements (node configurations)
  - Assume final assembly node is at Rock Island Arsenal, building 299
  - Account for ability to scale up build rate to 2/week
- Burden is on the proposer to make necessary agreements, including agreements with any proposed government entities
- Note the compressed build timelines
  - Will leverage off-the-shelf components
  - Will leverage flexible production processes
- Deliverables include configuration PDR and CDR along with delta-CDRs

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Task 3: Procure and install equipment at final assembly node

- Equipment installation at Rock Island Arsenal, building 299
  - Final assembly including metrology
  - Note that the FANG performer has responsibility for functional checkout
- No preference for acquisition approach (lease, purchase, other?)
- Performer is responsible for IT infrastructure and checkout
- Performer is responsible for checkout/calibration, updating manufacturing models, and maintenance/recertifications
- Deliverables include continuously updated master equipment list

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Task 4: Support manufacturability queries from FANG challenge participants

- FANG Challenge participants may have questions regarding iFAB-Foundry producibility for a specific component
  - Processes
  - Costs
  - Lead-time
- Performer must support interface for user queries (possibly via vehicleforge.mil)
  - Queries need to be answered in near real-time
  - Need to suggest design changes if appropriate
- May have several thousand queries per day
  - May need to support batch processing
  - Task 1 algorithms are essential part of providing Task 4 support
- Deliverables include daily and monthly usage reports

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Task 5: Configure foundry for specific FANG Challenge product

- Prepare the foundry to build a specific product
  - Technical data package provided by FANG performer
  - Develop the product flow (nodes, off-the-shelf deliveries, equipment utilization)
- Prepare the work instructions for building the product
  - CNC instructions for programmable equipment
  - Other equipment preparation such as repositioning and tooling preparation
  - Human worker instructions and training
  - Machine fixture instructions (fabricate, procure, and/or configure)
  - Material orders to vendors
  - Shipping arrangements
- Deliverables include
  - Manufacturing plans
  - Summary build reports

Note: Tasks 5-7 will be executed for each of the FANG challenges: Mobility/Drivetrain, Chassis/Survivability, and Full Vehicle

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Task 6: Manufacture FANG Challenge product

- Execute the plans developed in Task 5
- Costs will be addressed via contract modification
  - Task 1 configuration tools will be necessary to support rapid proposal development (7 calendar days from receipt of technical data package)
- Deliverables include
  - Contract modification proposal
  - Daily build status reports
  - Completed FANG Challenge products

Note: Tasks 5-7 will be executed for each of the FANG challenges: Mobility/Drivetrain, Chassis/Survivability, and Full Vehicle

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Task 7: Gather QA/QC and metrology data on manufactured product

- iFAB-Foundry performer is responsible for determining and documenting the "as built" product
  - Requires rapid metrology capability
- Note that the FANG performer is responsible for verification of system correctness (integration performance checks)
  - May result in rebuilds for components less than "correct-by-construction"
- Deliverables include
  - "As built" metrology data
  - QA/QC provenance of the product

Note: Tasks 5-7 will be executed for each of the FANG challenges: Mobility/Drivetrain, Chassis/Survivability, and Full Vehicle

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Proposal details

- Proposals intended to be simple, flexible, but technically specific
  - Single integrated technical and cost volume
  - No page limits, but be concise
  - FAR (CPNF, CPFF, FFP-Milestone Payable) and OTA contract vehicles acceptable

- Proposal evaluation criteria
  - Technical Merit
  - Alignment with DARPA Vision
  - Potential to Accomplish Technology Transition
  - Credibility of Offeror's Team
  - Realism of Proposed Costs

- Opportunity for comment during proposal preparation period
  - Questions directed to the respective BAA mailbox: DARPA-SN-12-07@darpa.mil
  - No one-on-one discussions will be held with the Program Office

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Proposal timeline

- Draft BAA released — 31 October 2011
- Proposers' Day (Virtual) — 10 November 2011
- BAA comments due — 18 November 2011
- Final BAA released — 28 November 2011 (est.)
- Proposers' Day (In person) — 12 December 2011
- BAA questions due — 16 December 2011 (est.)
- BAA question responses posted — 23 December 2011 (est.)
- Initial round of proposals due — 10 February 2012 (est.)
- Selection notification sent — 01 March 2012 (est.)
- Contract award — early June 2012 (est.)

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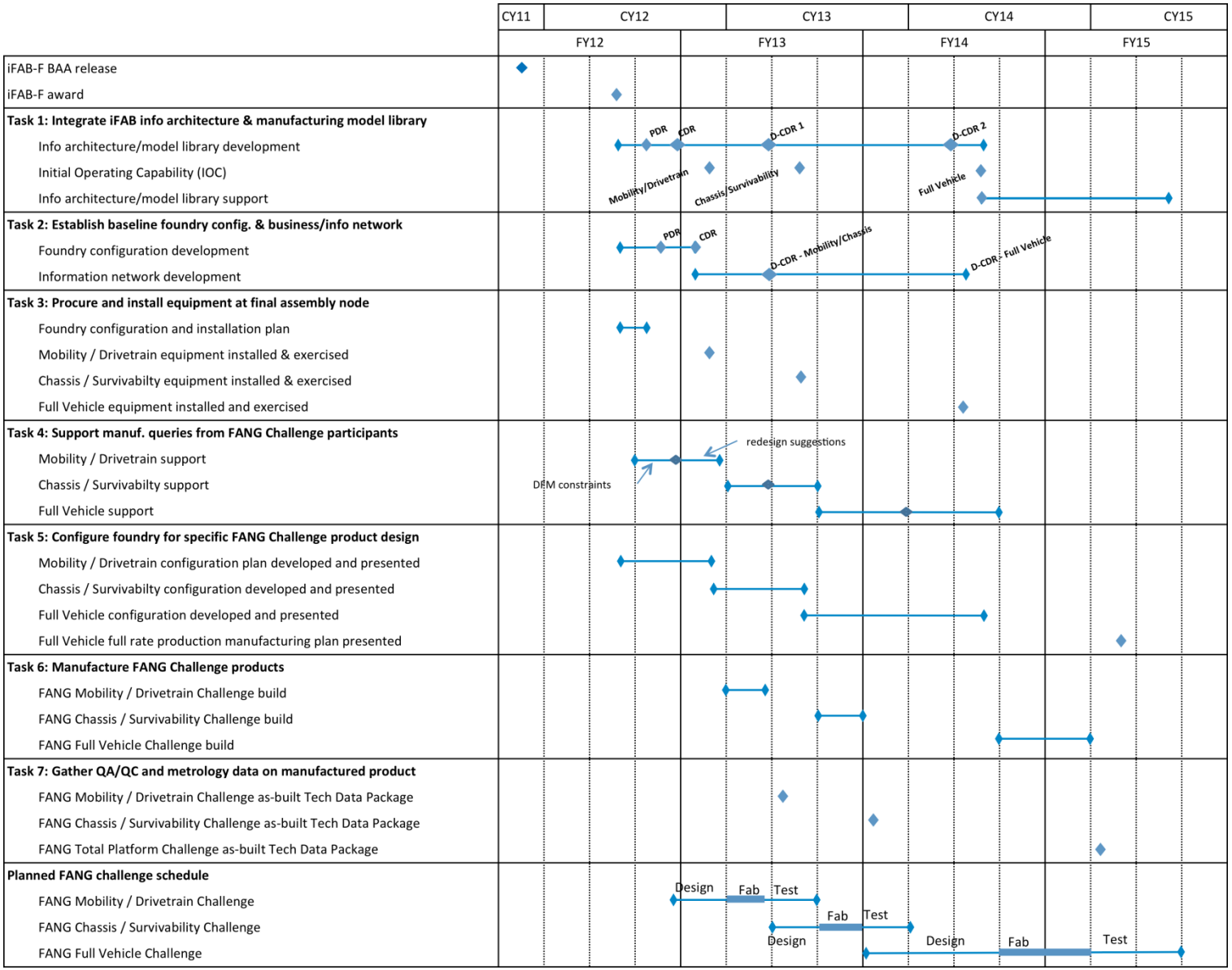
iFAB Foundry notional schedule



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Fast, Adaptable, Next-Generation Ground Vehicle (FANG)

LTC Nathan Wiedenman, Deputy Program Manager
Mr. Paul Eremenko, Program Manager
Tactical Technology Office

November 10, 2011

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FANG program overview

- Radically novel approach to design and manufacture of an IFV
  - Stage series of prize-based design competitions – FANG Challenges - for progressively more complex vehicle subsystems
  - Culminates in design of heavy, amphibious infantry fighting vehicle (IFV) with functional requirements to mirror Marine Corps' Amphibious Combat Vehicle (ACV)
  - FANG Challenges leverage META design tools and vehicleforge.mil collaboration environment
  - Supervise production, test, and evaluation of FANG Challenge products

- Three FANG design challenges/products
  - Mobility/Drivetrain
  - Chassis/Survivability
  - Full Vehicle

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FANG Challenge Designs/Products

- Mobility/Drivetrain
  - IFV mobility/drivetrain automotive rig for full scale dynamometer testing
- Chassis/Survivability
  - Complete IFV hull structure assembly and crew compartment
    - Tested for static and dynamic structural properties
    - Ability to incorporate modular bolt-on armor
  - Complete modular armor package
    - Fit checking on the hull structure assembly
    - Testing as survivability test articles for kinetic impact and blast
- Full Vehicle
  - Complete IFV for operational test & evaluation typical of initial lots of full rate production vehicles
- Each challenge intended as stand-alone design-build-test exercise
  - Products of the first two challenges do not necessarily feed into the Full Vehicle Challenge
  - Re-use will occur in vehicleforge.mil community and should be encouraged.

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FANG program scope and structure

- Up to $30.0 million available funding
- One award anticipated
- Proposer must address all five FANG BAA Tasks
- Period of performance – 12 month base from the date of award, two 12 month options for total of 36 month effort
- Proposals from entities outside of traditional defense performer base are welcome and encouraged

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FANG Tasks

- Task 1 – FANG Challenge Requirements Development
- Task 2 – FANG Challenge Execution
- Task 3 – Oversight of FANG builds in iFAB Foundry
- Task 4 – FANG IFV Test and Evaluation Support
- Task 5 – AVM Software Tool Suite Support and Curation

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Task 1 – FANG Design Requirements Development

- Allocate specific subsets of Marine ACV requirements to each of the FANG Challenges
- Represent ACV requirements in multi-objective preference surface

- Develop analytic framework by which Challenge designs can be objectively/transparently assigned a score for selection
  - Performer will be supplied with ACV program requirements as government-furnished information (GFI)
  - Point of departure decision theory approaches:
    - Multi-attribute value functions
    - Multi-attribute utility functions
    - Offerors encouraged to propose other approaches - justify their choice against these two
    - Approaches of stakeholder interviews involving lottery equivalence question (government will facilitate access)
- Detailed plan to verify the results of analytic framework for consistency with ACV requirements

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Task 2 – FANG Challenge Execution

- FANG performer responsible for all aspects for challenge execution
- Will act as an integrator of capabilities delivered by the vehicleforge.mil, META, and iFAB Foundry performers
- High-visibility of challenges - FANG performer will be required to work closely with DARPA program management team and public affairs office

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Task 2 – FANG Challenge Execution (Cont.)

- Develop rules for participation in the FANG challenges
- Seed vehicleforge.mil environment sample designs
- Seeding, nurturing, and growing the FANG designer community
- Ensuring that FANG requirements, models, C2M2L models, META software, all documentation is fully prepared, up-to-date, documented
- Monitor and report progress of the designer community in near real time
- Credentialing of vehicleforge.mil users
- Ensure appropriate access control and enforcement of IP policies
- Screen submitted designs for completeness and abnormalities
- Provide to DARPA ranking of designs with respect to the requirements model developed in Task 1
- Performing detailed multi-physics model-based verification of design
- Assemble a full technical data package for the winning design to pass to iFAB Foundry

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Task 3 - Oversight of FANG builds in iFAB Foundry

- FANG performer will assume total stewardship of the winning FANG Challenge designs

- Offerors should plan to situate a portion of performer team at the iFAB Foundry final assembly facility at Rock Island Arsenal
- Verification of custom-manufactured component specifications/tolerances at the lowest numbered part level (typically WBS level 6 or 7)
  - 10% sampling rate (1 in 10 components)
  - Off-the-shelf (OTS) components at a 1% sampling rate (1 in 100 components)
- Verification and validation of assembly- and subsystem-level power-on performance at WBS levels 2 and 3
  - Dynamometer capability, suspension test capability, vetronics system integration test bed, etc.
- Validation of high-level acceptance parameters for the complete FANG Challenge products as a roll-out articles
- When discrepancies occur, FANG performer's responsibility to develop an engineering fix

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Task 4 - FANG IFV Test and Evaluation Support

- Development of test plans in consultation with DARPA and USMC
- Execution of testing of FANG Challenge products, to include complete IFV

- Mobility/Drivetrain Challenge product testing of one vehicle test rig within large scale vehicular dynamometer
- Chassis/Survivability Challenge product testing:
  - One hull article – detailed dimensional metrology analysis of hull to design specifications
  - Dimensional metrology analysis of modular armor panels and fit checks/assembly to hull article
  - Live fire test protocol to assess survivability features of vehicle structure and modular armor panels
- Full Vehicle Challenge product – vehicle and system test and evaluation master plan (TEMP) of magnitude corresponding to limited production IFV
- Responsibility for operation, housing, delivery, and care/maintenance of FANG Challenge products

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Task 5 – AVM Software Tool Suite Support and Curation

- Curatorial/support role to ensure that META, iFAB, vehicleforge.mil, and C2M2L tools are properly tested, maintained, documented, supported, and distributed for FANG design needs

- Evaluation and deployment testing of tools
- Tool maintenance
- Ensure sufficient documentation
- Technical support of tools
- Tools available for distribution

- Detailed curation plan

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Proposal details

- Proposals intended to be simple, flexible, but technically specific
  - Single integrated technical and cost volume
  - No page limits, but be concise
  - FAR (CPNF, CPFF, FFP-Milestone Payable) and OTA contract vehicles acceptable

- Proposal evaluation criteria
  - Technical Merit
  - Alignment with DARPA Vision
  - Potential to Accomplish Technology Transition
  - Credibility of Offeror's Team
  - Realism of Proposed Costs

- Opportunity for comment during proposal preparation period
  - Questions directed to the respective BAA mailbox: DARPA-SN-12-08@darpa.mil
  - No one-on-one discussions will be held with the Program Office

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Proposal timeline

- Draft BAA released — 31 October 2011
- Proposers' Day (Virtual) — 10 November 2011
- BAA comments due — 18 November 2011
- Final BAA released — 28 November 2011 (est.)
- Proposers' Day (In person) — 12 December 2011
- BAA questions due — 16 December 2011 (est.)
- BAA question responses posted — 23 December 2011 (est.)
- Initial round of proposals due — 10 February 2012 (est.)
- Selection notification sent — 01 March 2012 (est.)
- Contract award — early June 2012 (est.)

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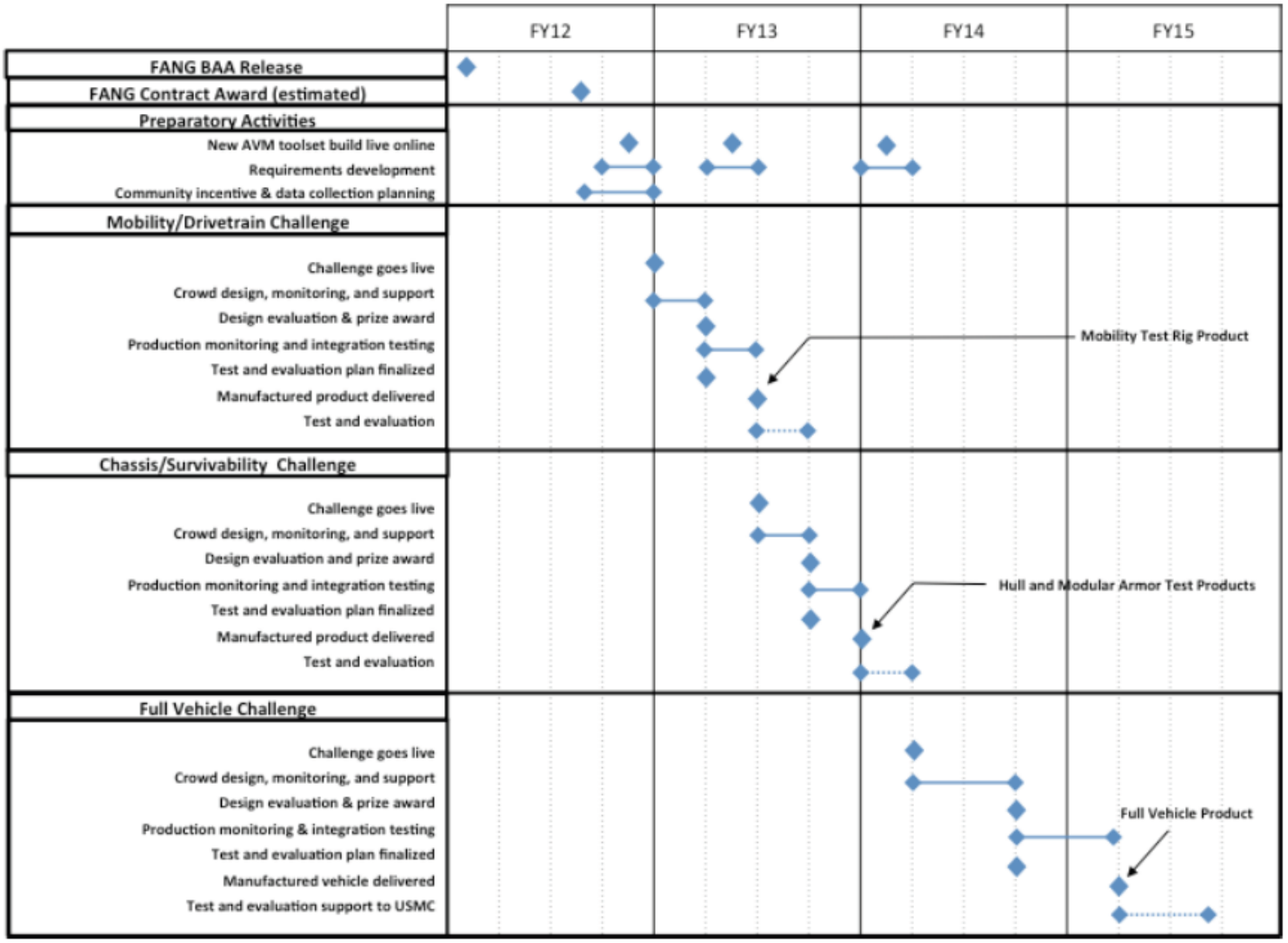
FANG BAA Schedule



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Proposers' Day – agenda

Introduction and logistics	LTC Nathan Wiedenman
DARPA and TTO Overview	Mr. Barry Ives
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DARPA

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BAA Process

Christopher L. Glista, Contracting Officer
DARPA Contracts Management Office

November 10, 2011

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BAA Process

- Described in Federal Acquisition Regulation Part 35
- For the acquisition of basic and applied research
- Shall only be used when “meaningful proposals with varying technical/scientific approaches can be reasonably anticipated.”
- Instructions are detailed in the BAA
- Following the proposal instructions assists the evaluation team to clearly understand what is being proposed and supports a timely negotiation!!!

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BAA Process – Eligibility Information

- All interested/qualified sources may respond
- Foreign participants/resources may participate to the extent authorized by applicable Security Regulations, Export Laws, etc.
- No portion of the BAA will be reserved for small business, no evaluation preference
- Government agencies/labs, FFRDC's, are subject to certain limitations
- Government agencies/labs, FFRDCs cannot propose to this BAA in any capacity, UNLESS they can clearly demonstrate the work is not otherwise available from the private sector AND they also provide written documentation citing the specific statutory authority (as well as, where relevant, contractual authority) establishing their eligibility to propose to government solicitations.

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BAA Process – Evaluation/Award

- Government reserves the right to select for award all, some, or none of the proposals received and to award without discussions
- No common Statement of Work - Proposals evaluated on individual merit and relevance as it relates to the stated research goals/objectives rather than against each other
- Only a duly authorized Contracting Officer may obligate the Government

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BAA Process – Be Aware

- Organizational Conflict of Interest & Procurement Integrity (IPA, SETA/Performer, Other)
- Central Contractor Registration (CCR), Online Representations and Certifications Application (ORCA), & Wide Area Workflow (WAWF)
- Small Business Subcontracting Plan Requirements

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BAA Process – Communications

- After Issuing the BAA – ALL questions to BAA email addresses
- After Receipt of Proposals – Government (PM/PCO) may communicate with proposers to understand the meaning of some aspect of the proposal that is not clear or to obtain confirmation or substantiation of a proposed approach, solution, or cost estimate
- Informal feedback may be provided once selection(s) are made

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BAA Process – Award Instrument

- Proposers without a DCAA-approved cost accounting systems are not eligible for cost-reimbursement contracts. May receive fixed price contracts/OTs with performance-based payments

- No grants or cooperative agreements

- Section 845 Other Transaction – must meet eligibility criteria
  - 1/3 cost share or non-traditional defense contractor participating to "a significant extent."

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BAA Process – Subcontracting for Research & Development

- "Since the selection of R&D contractors is substantially based on the best scientific and technological sources, it is important that the contractor not subcontract technical or scientific work without the contracting officer' s advance knowledge."

- All subcontractor supporting cost documentation to be provided at the same level as that of the prime

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BAA Process – Intellectual Property

- Data Rights Assertions - Assert rights to all technical data & computer software to be generated, developed, and/or delivered to which the Government will receive less than Unlimited Rights
  - Assertions required for both prime and subs
  - Use defined “Basis of Assertion” and “Rights Category”
  - Does not apply to commercially available, third-party technical data or software. However, use thereof shall be identified in proposal
  - This information is assessed during evaluations

- Include documentation proving your ownership of appropriate licensing rights to all patented inventions (or inventions for which a patent application has been filed) that will be utilized under your proposal for the DARPA program.

- i-Edison – All patent reports and notifications must be submitted electronically

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BAA Process – Public Release of Information/Pre-publication Approval

- DARPA anticipates funding the effort with RDT&E Budget Activity “6.2”, Applied Research Funds

- Fundamental Research, no pre-publication review requirements for academic institutions performing on-campus

- Applies to academic institutions performing as either primes or subs

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