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ASCR
Small Business Innovative Research
Small Business Technology Transfer
Outreach and Engagement

ASCAC March 27, 2012

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Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR)

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SBIR/STTR Funding Opportunity Announcement (FOA)

FY 2012 Phase 1, Release 2 Now Available

The FOA was released November 28, 2011. Letters of Intent are due by December 20, 2011 and the FOA closes January 31, 2012.

[Read More »](#)

FUNDING OPPORTUNITY ANNOUNCEMENT

Announcing!

SBIR/STTR

FY 2012 Phase I (Release 2)

Funding Opportunity Number: DE-FOA-0000628
 Released November 28, 2011

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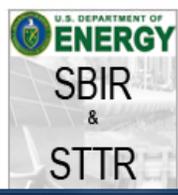
Supporting scientific excellence and technological innovation through the investment of federal research funds in critical American priorities to build a strong national economy... one small business at a time.

SBIR & STTR Information

CONTACT INFORMATION

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[More Information »](#)



ASCR Funding Levels

	FY11	FY12	FY13	FY14	FY15	FY16	FY17
SBIR	2.5	2.6	2.7	2.8	2.9	3.0	3.2
STTR	0.30	0.35	0.35	0.40	0.40	0.45	0.45
Total	2.80	2.95	3.05	3.20	3.30	3.45	3.65

- Examples of SBIR/STTR Funding assuming \$442 M budget
 - FY11 set-aside = \$12.4M
 - FY17 set-aside = \$16.1M



Eligibility & Phased R&D Approach

- **Small Business Eligibility**

- For-profit, at least 51% US-owned, small business with 500 or fewer employees located in the US
- Principal Investigator (PI) primary employment must be with the small business (SBIR). For STTR, PI may come from the research institution.
- *No cost sharing required*

- **Phased R&D Approach**

- Phase I: Feasibility, 9 months, \$150k
- Phase II: Prototype Development, 2 years, \$1M
- Phase III: Commercialization, funded by private sector or federal agencies



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SBIR/STTR Annual Funding Cycle

	Release 1 Phase I Science and Engineering Topics	Release 1 Phase II Science and Engineering Topics
Topics Issues	July	Phase I from previous year
Funding Opportunity Announcement Issued	August	October
Letters of Intent Due	September	N/A
Full Applications Due	October	December
Award Notifications	January	February
Grant Start Date	February	March

Release 2 awards cover Clean Energy and Nuclear Security Topics

Release 3 awards cover Energy Efficiency and Renewable Energy



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ASCR SBIR/STTR Strategy

- **Align ASCR program with SBIR office demand for more commercialization potential**
- **Focus program on transferring research results to industry**
- **Start with small well focused effort and grow over time**
 - Network operations and services
 - HPC usage by engineering and manufacturing communities



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FY12 – SBIR/STTR Revised Topics

- **Advanced Network Technologies and Services**
 - Extensions to perfSONAR
 - Management tools for Network Operators
 - Optical Network Support
- **Increasing Adoption of HPC modeling and simulation in the Advanced manufacturing and Engineering Industries**
 - Turnkey HPC solutions for Manufacturing and Engineering
 - HPC Support Tools and Services
 - Hardening of R&D codes for Industry use



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HPC Outreach Activities

- **Started engagement activities by reaching out to various communities and organizations**
 - ISV community through SciDAC Outreach center
 - National Digital Engineering and Manufacturing Consortium
 - National Center for manufacturing Sciences Digital Manufacturing Special Interest Group
 - Council on Competitiveness
 - California Small Business Development Corporation Seminars
 - Rensselaer Poly and High Performance computing Consortium (HPC2)
 - Digital Manufacturing Report articles ([Aug 2011](#) and [Feb 2012](#))



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FY12 Phase I summary

- Revised FOA, 2 major topics, 4 subtopics each
- Received 80 proposals 24 Network Tools, 56 HPC for manufacturing and engineering
- 6 proposals declined in first-step reviews
- 74 proposals peer reviewed
- 242 reviews
- 50 reviewers
- 25 recommended for funding (\$3.5M)



Network Topic Projects (6)

Category	Title	PI	Institution
a Extensions to perfSONAR	Programmable, Extensible and Secure perfSONAR Appliance for Multi-domain Enterprise Monitoring	CALYAM, ANJANEYAPRASAD	The Samraksh Company
b Management tools for Network Operator	LiveMap: A Multi-domain Network Flow Visualization and Analysis Tool	SMITH, JOHN	Referenta Systems Inc.
b Management tools for Network Operator	Holistic Operations Planning System (HOPS)	DAVIS, RYAN	Accelerated Data Works, Inc.
c Optical Network Support Services	Topic 01C - Embedded Photonic Components for 100 Gbps Data Transport	KUZNIA, CHARLIE	Ultra Communications
c Optical Network Support Services	Integrated 100Gb/s Transmitter Chips	FISH, GREG	Aurrion
c Optical Network Support Services	Low-cost Fiber Optic Network Reflectometer	COUCH, PHIL	Fusion Factors LLC



Turnkey HPC solutions (8)

Category	Title	PI	Institution
a Turnkey HPC Solutions for Manufacturing and Engineering	High Fidelity Wind Turbine Analysis Tool Leveraging High Performance Computing (HPC)	SABERI, HOSSEIN	Advanced Rotorcraft Technology
a Turnkey HPC Solutions for Manufacturing and Engineering	A Framework for Accelerating Innovations Through Simulation-Based Design	O'BARA, ROBERT	Kitware, Inc.
a Turnkey HPC Solutions for Manufacturing and Engineering	Enterprise Software for Interactive and Super Efficient Processing of Large Multi-dimensional Datasets	POPOVICI, ALEXANDER	Z-Terra
a Turnkey HPC Solutions for Manufacturing and Engineering	Catalytic Converter Modeling on GPU Accelerated Workstations	CHOUNDARY, CHEKURI	Rnet Technologies, Inc.
a Turnkey HPC Solutions for Manufacturing and Engineering	pCloud: A Cloud-based Power Market Simulation Environment	RUDKEVICH, ALEKSAN	Newton Energy Group
a Turnkey HPC Solutions for Manufacturing and Engineering	The Data Genome Project	SCHMIDT, MICHAEL	Nutonian Inc.
a Turnkey HPC Solutions for Manufacturing and Engineering	Optimization-Based Production Scheduling for Complex Manufacturing Plants Delivered as a Service using High Performance Computing Architecture & Algorithms	HANAGANDI, VIJAY	Optimal Solutions, Inc.
a Turnkey HPC Solutions for Manufacturing and Engineering	CMC Manufacturing Technology	CROMPTON, JEFFREY	AltaSim Technologies LLC



HPC Support and Codes (8)

Category	Title	PI	Institution
b HPC Support Tools and Services	HPC Auto-Assistant: Making HPC Software and Tools Easier to Use for the Experienced (Not Expert) User	ABRAMS, MARC	Harmonia Holding Group, LLC
b HPC Support Tools and Services	2b A Python Interface to Trilinos/Tpetra for High-Level Access to HPC Solvers	OLIPHANT, TRAVIS	Enthought, Inc.
b HPC Support Tools and Services	2b Tools for Auto-calibration of Building Energy Models and Predictive Control	BOSWORTH, DAVID	BUILDlab, LLC
b HPC Support Tools and Services	02b: A Scalable Targeted Debugger for Scientific and Commercial Computing	MILLER, BARTON	Argo Navis Technologies, Llc
b HPC Support Tools and Services	02b: Open SpeedShop Ease of Use Performance Analysis for Heterogeneous Processor Systems	GALAROWICZ, JAMES	Argo Navis Technologies, Llc
c Hardening of an R&D Code for Industry Use	02c: User-Centered, Collaborative, Web and Radiance-Based Lighting Simulation, Visualization, and Analysis	GLASER, DANIEL	Light Foundry
c Hardening of an R&D Code for Industry Use	Packaging PETSc for Commercialization	AUSTIN, TRAVIS	TECHX Corp.
c Hardening of an R&D Code for Industry Use	FieldView-VisIT: A Modern Engineering Post-Processing System for Ultra-Scale Physics Based Simulation	LEGENSKY, STEVE	JMSI Inc.



HPC Other (3)

Category	Title	PI	Institution
d Other	High-Performance Nonlinear Optimization Software for Power Applications	WALTZ, RICHARD	Ziena Optimization LLC
d Other	Manufacturing Expertise as a Service Portal	GRAY, MARK	Nimbus Services Inc
d Other	Extension of the Vorcat Technology to Moving Boundaries	KRISPIN, JACOB	Vorcat Inc



Planned Activities

- **Increase outreach activities**
 - Travel to same meetings in 2012 (HPC outreach)
 - Travel to NANOG 54 in June (Network outreach)
 - Need community help here
- **Consider partnerships with Applied Program offices**



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Expand topic as needs arise

- **Video Conferencing**
 - Multi-vendor solutions
 - Potential to engage Esnet staff to run workshop – June 2012
- **Software as a Service model**
- **3D Manufacturing**
- **Additive Manufacturing**



ASCR SBIR/STTR Program

Annual Funding
Opportunity

ASCR - \$10 M
appropriation



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Planned Outreach for Network Operations

- **ASCR is not the consumer for these products**
- **Continue HPC outreach activities with follow-up visits to most/all previous venues**
- **Increase awareness of Network Tools topic**
 - JT/ESCC
 - NANOG
 - ???

- **Please consider being an ASCR representative at a venue you will be attending**



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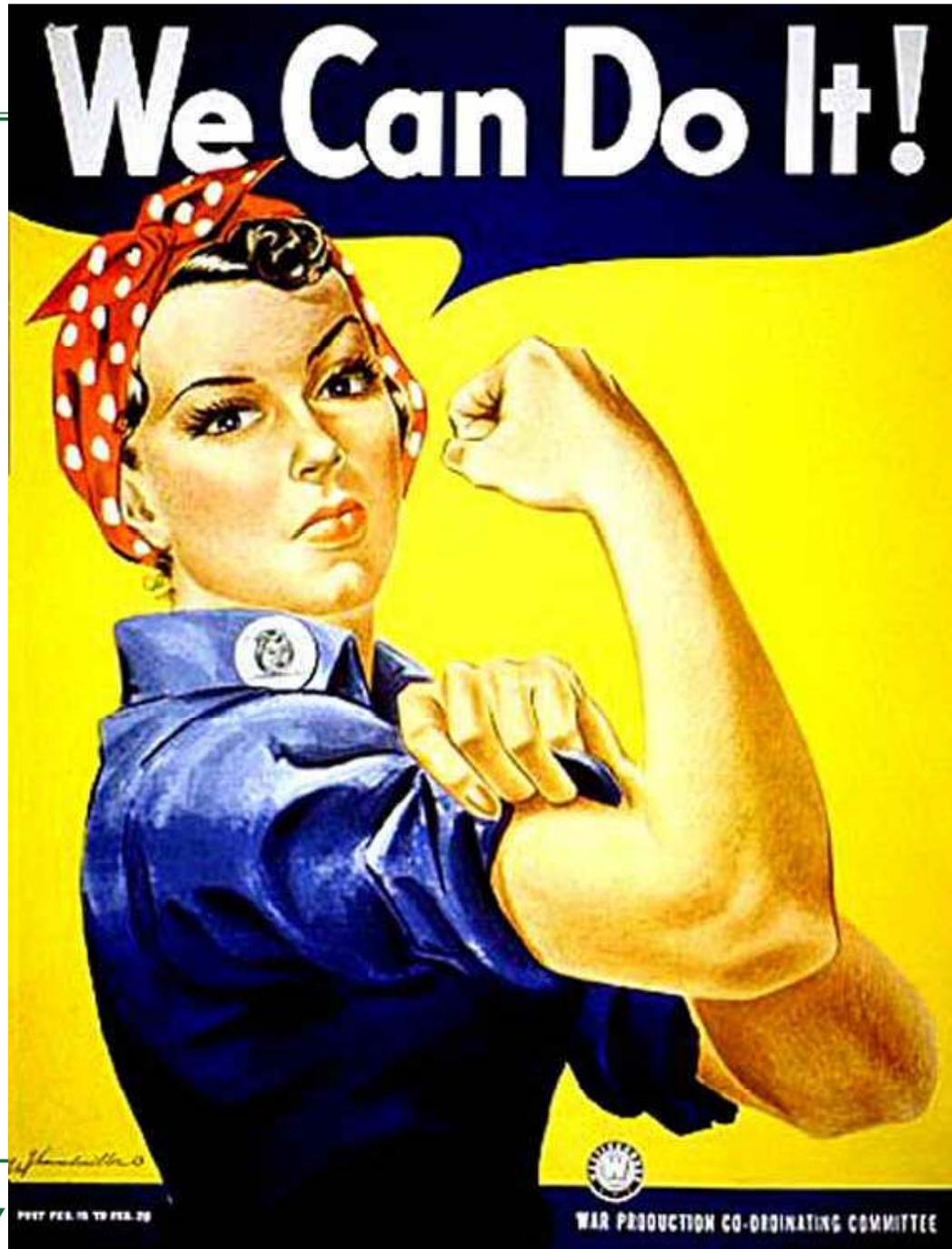
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What YOU need to DO!

- **Talk with your colleagues, staff, friends, family, soothsayers, and Internet prophets about**
 - Tools and services you need manage/operate your network
 - New tools and/or services
 - Upgrades/hardening of existing tools/services
 - ISV's and small businesses that
 - You know or contact you
 - Your Lab tech transfer office knows about
 - You want to start
- **Failing that, be prepared to get an email from me this fall asking you to review proposals!**



Together we
can get you
the tools
and services
you need



Otherwise,
good luck
dealing with
those pesky
scientists



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WAR PRODUCTION CO-ORDINATING COMMITTEE