



IP Strategies: Creating and Maintaining Sustainable Competitive Advantage

Welcome! The workshop will get started at 1PM.

Workshop recording and slides will be posted.

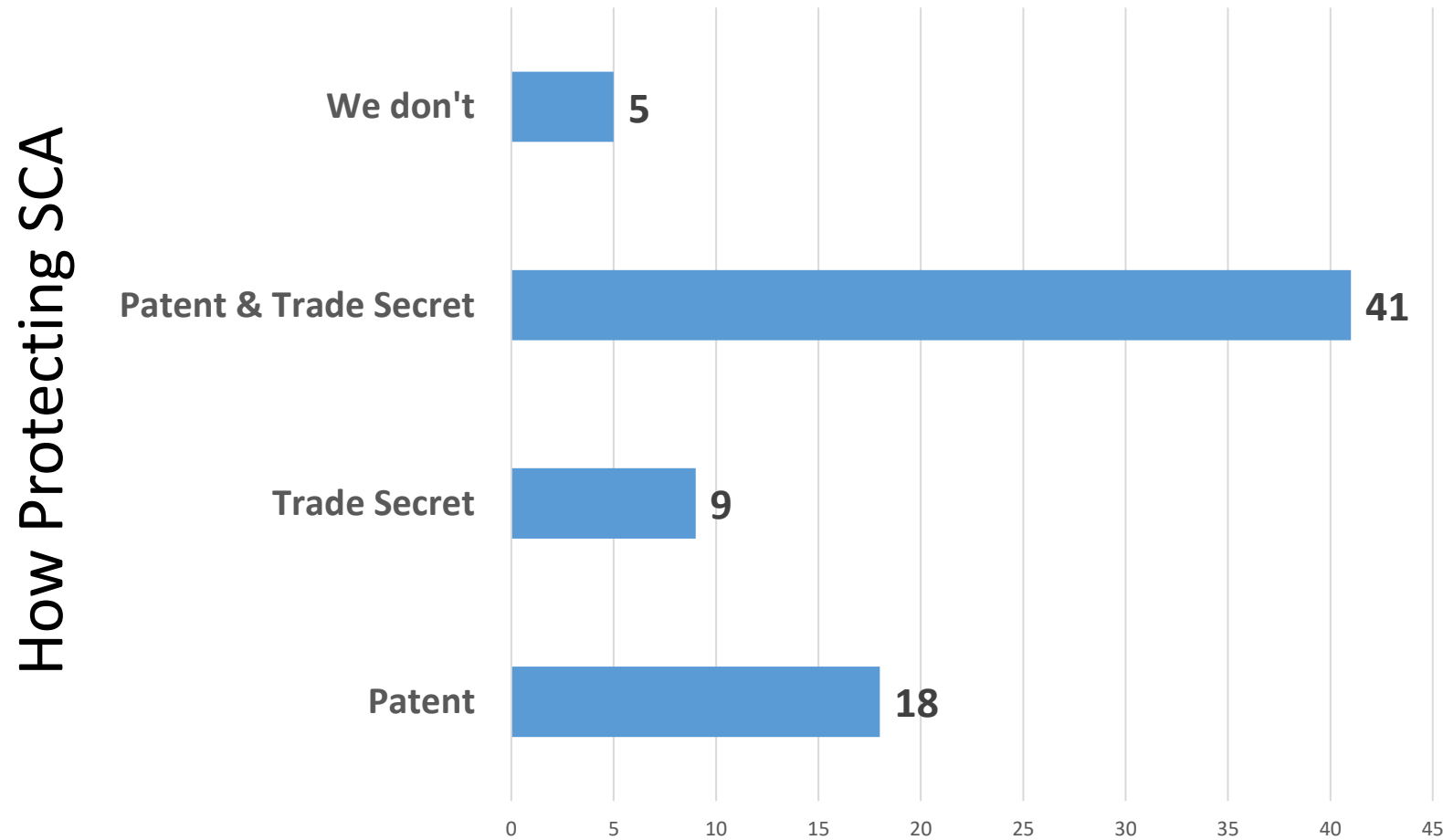


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GOOD NEWS!!

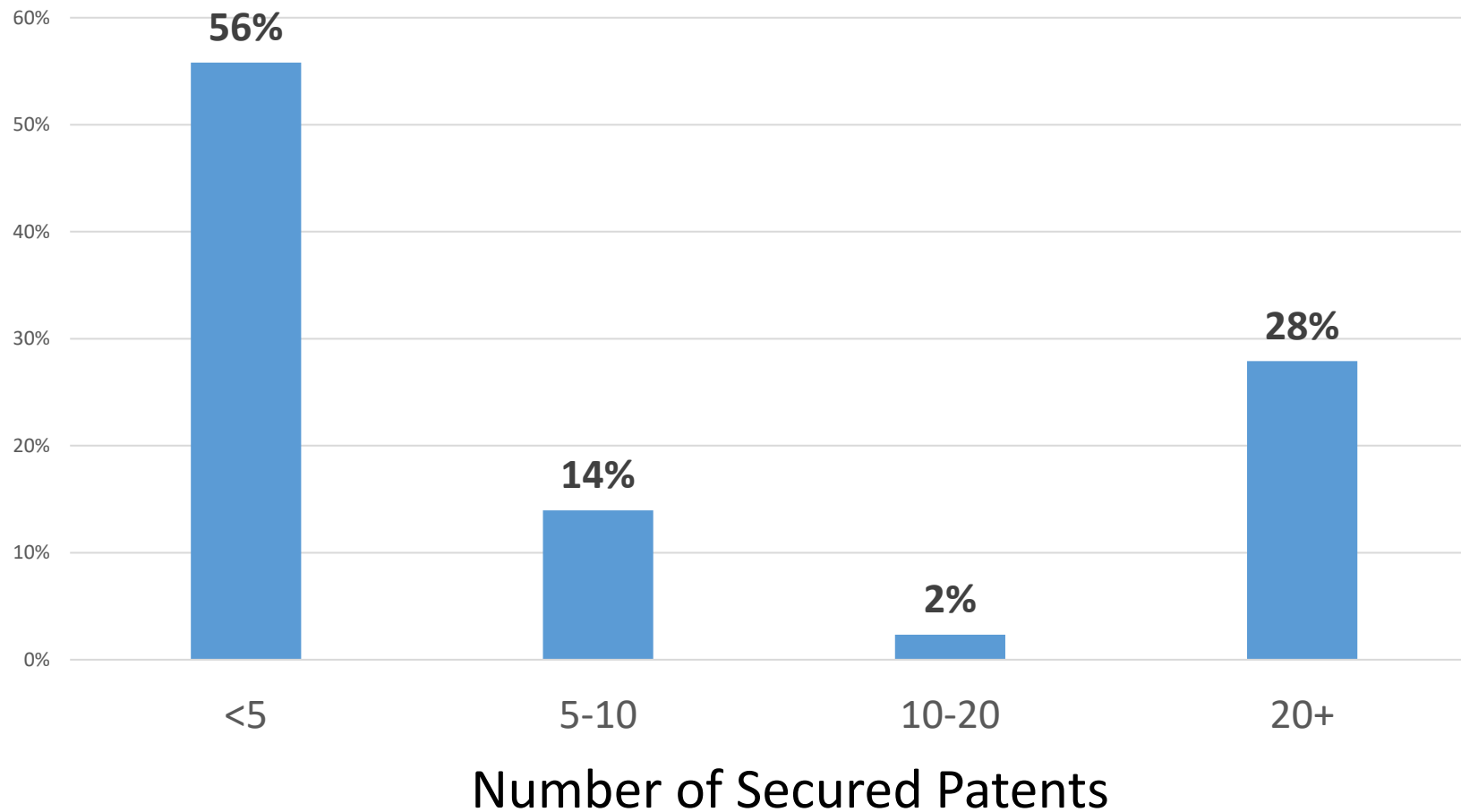
DOE awardees are protecting their SCA



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73% have secured patents



Workshop Agenda



1:10 PM — 2:00 PM

IP Strategies

Tina Dorr | Partner, Barnes & Thornburg LLP

Christine McCarthy | Partner, Barnes & Thornburg LLP

2:00 PM — 2:30 PM

USPTO Startup & Small Business Resources

Elizabeth Doughtry | Regional Outreach Director, Northeast Regional Outreach Office, United States Patent and Trademark Office

2:30 PM — 3:00 PM

Protecting IP: DOE Reporting, Partnerships, and Commercialization

*Mike Dobbs | Deputy Chief Counsel for Intellectual Property Law
Office of Science, Department of Energy*

3:00 PM — 3:20 PM

Awardee Highlight – Driving Growth & Revenues from Open Source Software

Lisa Avila | President & CEO, Kitware, Inc.

3:20 PM — 3:55 PM

Lessons Learned Awardee Panel

Lisa Avila | President & CEO, Kitware, Inc.

Isar Mostafanezhad | Founder & CEO, Nalu Scientific, LLC

Raghubir Gupta | Founder & CEO, Susteon Inc.

Sudarshan Gupta | COO, Susteon Inc.



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DOE Partnering Resource Updates

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Tech to Market (T2M) Advisor - Partnering

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Virtual Quarterly Commercialization Workshops



- Focus on topics that are typical areas of weakness - manufacturing, licensing, financial modeling, preparing to pitch, intellectual property strategies, etc.
 - FY22 Q4 - **Commercialization and the Power of Partnering**
 - FY23 Q1 - **Preparing to Pitch**
 - FY23 Q2 - **Financial Modeling**
 - FY23 Q3 - **Navigating Phase III Contracting**
 - FY23 Q4 - **Licensing**
 - FY24 Q1 – **Manufacturing**
 - FY24 Q2 - **Financial Modeling based on Cash Flow**
 - FY24 Q3 – **Preparing for Product Launch**
 - FY24 Q4 – **Developing a Strategic Cap Table**
 - FY25 Q1 – **IP Strategies: Creating and Maintaining SCA**



<https://bit.ly/DOECommercializationWorkshops>

ALL WELCOME!!



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Virtual Quarterly Commercialization Workshops



Other virtual workshops scheduled to take place in 2025 include:

- FY25 Q2 workshop: ***Customer Discovery 101*** – June 25th
- FY25 Q3 workshop: **Topic TBD** – September 17th
- FY25 Q4 workshop: ***Developing and Compensating a Board of Advisors*** – December 10th

<https://science.osti.gov/sbir/Commercialization-Resources/Virtual-Commercialization-Workshops>



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SBIR Partnering Platform



- **SBIR Partnering Platform** provides searchable database where SBIR/STTR applicants (**INNOVATORS**) can find potential **PARTNERS** and network with other **INNOVATORS** to complete your team through collaboration and/or subcontract
 - Find **PARTNERS** using keyword and AI searching; myriad of filtering options
 - Find SBIR funding opportunities across all agencies
 - Bookmark favorites; Confidential messaging
 - **Network** with other **INNOVATORS** on the **Community Page**; collaborate/subcontract to complete your team!
 - Newsfeed for applicable industry/stakeholder news
 - Resource pages for NL contacts and workshop recordings



<https://www.sbirpartnering.org/doe>



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DOE Disclaimer: By enabling and publishing the DOE SBIR Partnering Platform, DOE is not endorsing, sponsoring, or otherwise evaluating the qualifications of the individuals and organizations that appear on this platform as partners, resources, awardees or innovators.

Welcome to SBIR Partnering

Helping SBIR/STTR-funded **INNOVATORS** find commercialization **PARTNERS**, and **PARTNERS** find competitively vetted, cutting-edge technologies that solve critical problems and advance the current state-of-the-art, with support from the Department of Energy and the National Heart, Lung, and Blood Institute, NIH.

THE NHLBI PARTNERING PORTAL IS NOW OPEN!
Learn More



Partners

Partners play a critical role in transitioning advanced technologies from SBIR/STTR funded programs to the commercial market. Partnering with an SBIR/STTR funded small business provides you with immediate access to innovative, advanced technologies that have already been vetted having been through a competitive award process. These are cutting-edge technologies that can help you reach your company's net-zero and sustainability goals. Many are disruptive and looking to enter emerging markets. Register with either the **DOE** or **NHLBI** Partnering Portal to access thousands of competitively vetted, cutting-edge **TECHNOLOGIES**:

Department of Energy

The Department of Energy (DOE) is the third largest federal agency participating in SBIR/STTR. DOE issues about \$300M in grants annually through 300-400 Phase I awards and 100-200 Phase II awards. Recipients are among the highest ranked, most technically meritorious applicants. Studies show that small businesses are 30% more likely to successfully commercialize their SBIR/STTR funded technology if they develop the necessary partnerships.

National Heart, Lung, and Blood Institute

The National Heart, Lung, and Blood Institute's (NHLBI) Small Business Partnering Platform connects NHLBI funded heart, lung, blood and sleep technologies to private capital resources. Designed to connect federally funded innovators and companies with investors, strategic partners, clinical collaborators and industry experts, this powerful platform facilitates development opportunities with private investment.

- Pick **DOE** or **NHLBI**
- **INNOVATORS** can move seamlessly between the sites
- **PARTNERS**
 - Providers will be visible on both sites
 - Others will need to **opt-in**
- **Update your bookmarks!**

THE 2024 VP3 PITCH PROGRAM AGENDA IS NOW AVAILABLE!

[LOGIN](#)

| [REGISTER](#)

| [VIEW AGENDA](#)

Click to Register as a Partner!

Partners get access to 1000+ competitively vetted, cutting-edge technologies!

Click to Register as an Innovator!

Innovators can search for funding and engage with partners!

FACTS

PHASE III SUCCESS

After a DOE SBIR Phase II award, Clinical Micro Sensors obtained venture capital investments, leading to an acquisition and subsequent creation of GenMark Diagnostics, a publicly traded company.

IMPACT


Clinical Micro Sensors


Awardees can find funding opportunities & partners




🏠 My Dashboard

Features


Messages
View your conversations, reply to messages and send new messages to partners.
[Chat >](#)


Search
Search for partners and funding opportunities with keyword or AI-assisted recommendations.
[Partners >](#) [Funding >](#)


My Profile
Edit your personal information and organization details, add technologies, or update your password.
[Edit >](#)

🔖 Your Saves

Manage, export, or set notifications for your saved SBIR awards here. Select an item to view additional details.



Awardees search based on their unique needs

My Dashboard / Partner Search

Keyword Search AI-Powered

Partner Search ?

Search by keyword

Service Category (1) Clear All

View By State Partner Role Service Category Show 20 of 569 partners < 1 2 3 4 n

Corporate Venture 11

Incubator Accelerator 9

Industry Stakeholder 18

Investor 20

Provider 480

Apply

Commercialization Services 27

Engineering Design 160

Industry Stakeholder 1

Manufacturing 150

Technical 2

Apply

Southwest Research

San Antonio, TX

Description
SwRI, headquartered in San Antonio, Texas, is a nonprofit, applied research and development organization serving industrial and government clients. SwRI consists of nine research centers in physical sciences.

Energy Advanced Materials Transportation Advanced Computing

Advanced Instrumentation Artificial Intelligence

View Details

Aon – Intellectual Property Solutions

New York, NY <https://www.aon.com/>



Network with other INNOVATORS and Follow Relevant News...



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Create Post

Close Create Post

Select at least one subject tag

Title
Give your post a title (250-character max)

Post
Provide details regarding your announcement or event (5000-character max)

Post

- Looking for a Mentor
- Looking for a SME
- Looking to collaborate/subcontract on a particular topic and/or project
- Other

Resource Pages – Find NL SBIR POCs



Dashboard

Community

New
Resources

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Resources

NATIONAL LABS

COMMERCIALIZATION TUTORIALS

MARKET RESEARCH (COMING SOON)



[Ames National Laboratory](#)

Ames National Laboratory is a government-owned, contractor-operated national laboratory of the U.S. Department of Energy (DOE), operated by and located on the campus of Iowa State University in Ames, Iowa.

SBIR Contact

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[Argonne National Laboratory](#)

Argonne is a multidisciplinary science and engineering research center, where talented scientists and engineers work together to answer the biggest questions facing humanity, from how to obtain affordable clean energy to protecting ourselves and our environment.



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Resource Pages – View Commercialization Workshop Recordings



NATIONAL LABS **COMMERCIALIZATION TUTORIALS** MARKET RESEARCH (COMING SOON)

Grid of workshop recordings:

- Navigating Phase III Contracting**
An introduction to the challenges in interpreting/executing Phase IIIs
2:53:20
- Preparing to Pitch**
An educational overview of what should be done as you prepare to pitch
3:25:10
- Financial Modeling Based on Cash Flow**
An overview of cash flow and its significance on making operational decisions
2:09:27
- Preparing to License – Commercialization Workshop**
- Financial Modeling Workshop**
- Preparing to Manufacture – Commercialization Workshop**

- Preparing to Pitch
- Licensing
- Manufacturing
- Financial Modeling
- Navigating Phase III Contracting
- Preparing for Product Launch



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VP3 Pitch Program ▾

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View your conversations, reply to messages

Europe's Largest Renewable Energy Generator to Invest \$6.6B in Norwegian Hydro, Wind

Published: 01/11/2024

Source: www.EnvironmentEnergyLeader.com



Statkraft, the largest renewable energy generator in Europe, is investing nearly \$6.6 billion into its Norwegian hydro and wind power facilities and construction of new onshore wind farms.

Wholesale Electricity Market Data

Published: 01/12/2024

Source: www.eia.gov



(Thu, 11 Jan 2024) This site contains spreadsheets with wholesale electricity and natural gas data from seven major trading hubs that cover most regions of the United States. The data are through January 9, 2024, republished, with permission, from the Intercontinental Exchange (ICE).

DOE Announces Next Steps to Build Domestic Uranium Supply for Advanced Nuclear Reactors As Part of President Biden's Investing in America Agenda

Published: 01/09/2024

Source: www.energy.gov



DOE Announces Next Steps to Build Domestic Uranium Supply for Advanced Nuclear Reactors As Part of President Biden's Investing in America Agenda.



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Other DOE Partnering Resources



- Looking for SMEs, facilities, collaborators at National Labs? Visit <https://www.labpartnering.org/>
 - *Another way to find SMEs, collaborators, subcontractors - review related research being done at research institutes (universities, colleges); check publications*
- Looking for facilities for testing, integration and/or demonstration at National Labs
 - [Energy Systems Integration Facility \(ESIF\)](#), National Renewable Energy Lab (NREL)
 - [Grid Research Integration and Deployment Center](#), Oak Ridge National Laboratory (ORNL)
 - [Electric Grid Test Bed](#), Idaho National Laboratory (INL)
- Several [additional DOE Resources](#) are available:
 - [American-Made Challenges](#)
 - [Lab-Embedded Entrepreneurship Program \(LEEP\)](#) (NREL, ORNL, LBNL, ANL) and [New Mexico LEEP](#) (SNL & LANL)
 - [OTT/OCED/EERE Voucher Program](#) (use for test/certification & manufacturing next steps)



You will need
partners to
successfully
commercialize...

Having SCA makes
this easier...



Unlocking Competitive Advantage: IP Strategies and Protecting Software with Open-Source AI



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Christine McCarthy

Partner





Christine.McCarthy@btlaw.com

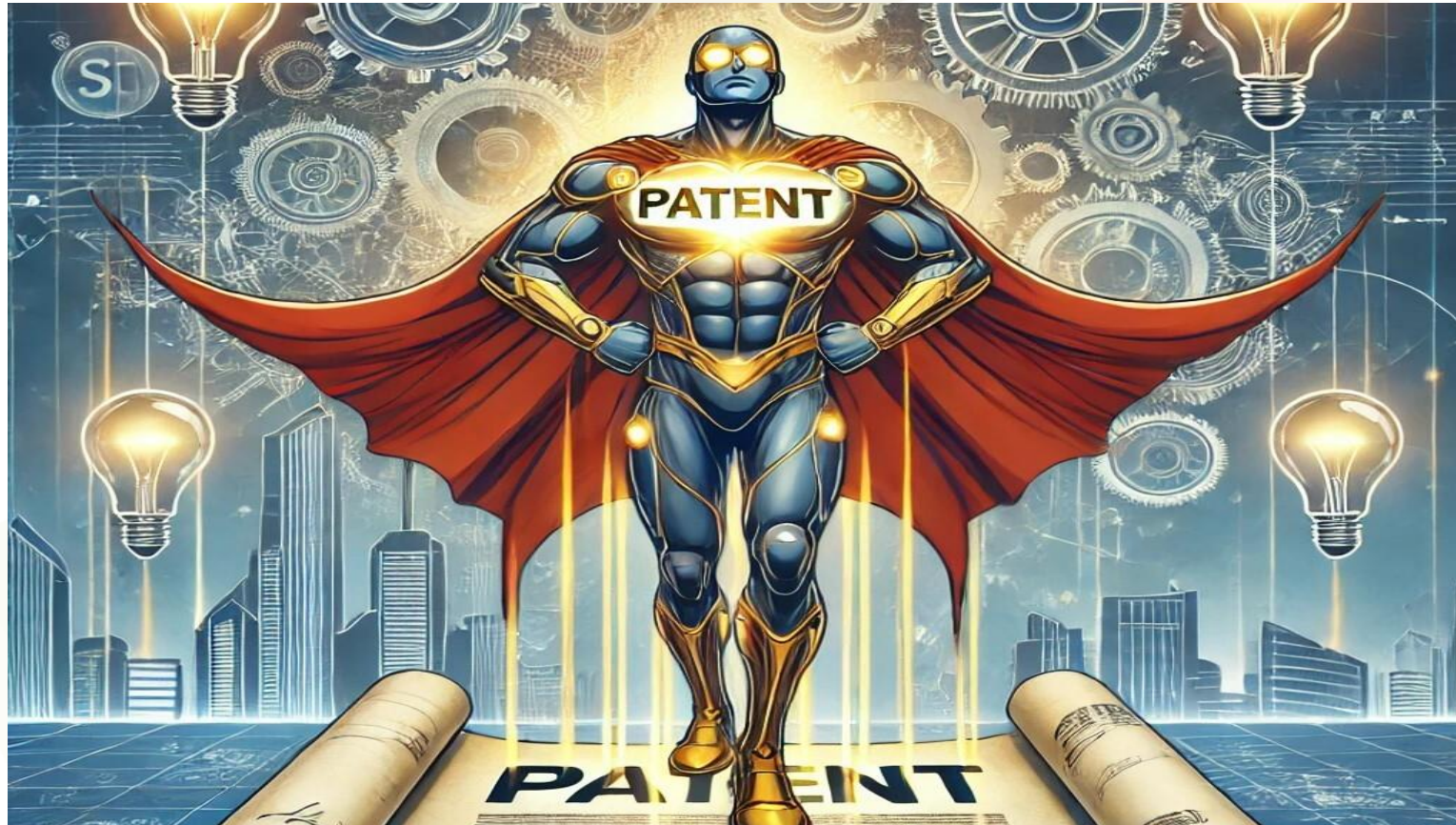
<https://www.linkedin.com/in/christinehmcCarthy/>

Leveraging Patents and Trade Secrets for Competitive Edge

Advantage	Description
 Monopoly Power	Grants exclusive rights, blocking competitors.
 Market Leadership	Differentiates products/services for a strong market position.
 Profit Potential	Generates revenue through licensing or sales.
 Competitive Shield	Deters new competitors with legal barriers.
 Innovation Catalyst	Promotes ongoing innovation and R&D investment.
 Prestige Boost	Enhances reputation as an industry leader.
 Legal Safeguard	Protects against infringement and misappropriation.
 Strategic Leverage	Strengthens negotiations for partnerships and mergers.

Types of IP

IP	Coverage	Process	Length
 Patents	Inventions, Designs	File patent application	Inventions: 20 yrs. Designs: 15 yrs.
 Trade Secrets	Secret that provides a business advantage	Establish and maintain secrecy	No set limit; until not secret
 Trademarks	Names, logos, other things identifying source of goods/services	Use or registration	No set limit; until generic or no longer used in commerce
 Copyrights	Expression in a tangible medium	Use or registration	Author life + 70 yrs. or works 95 / 120 yrs. for works for hire



Patents

What it is, why it matters, and how to get it!

What is patent protection?



Truths

- Patents give you exclusionary rights only to **make, use, sell, offer to sell, and import**
- Patents grant limited time protection in exchange for public disclosure
- No worldwide patent: territory specific

Un-Truths

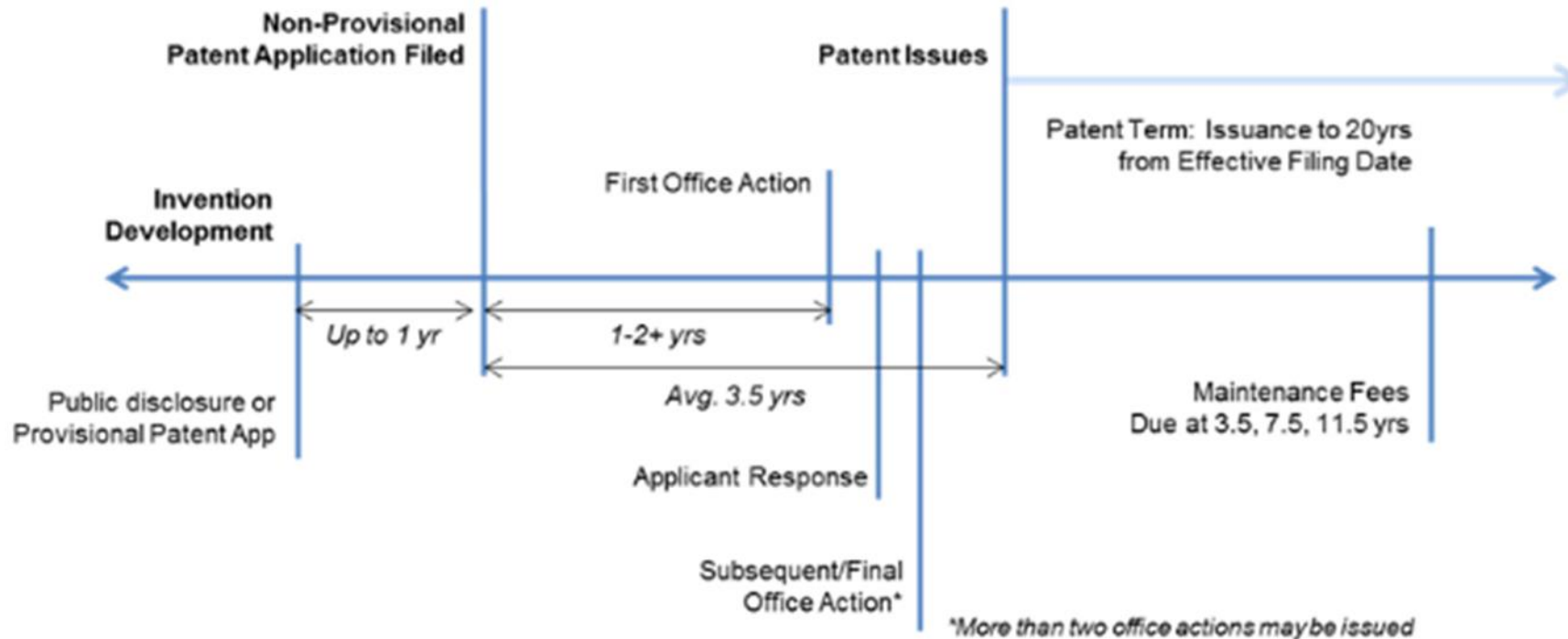
- Patents guarantee market success
- Patents are only for ground-breaking inventions
- Patents are too expensive for small businesses
- Owning a patent means you can produce and sell your product

How are patents competitive?

-  Offensive: exclude others from practicing your invention and create barriers against competitive market entrants.
-  Defensive: patent disclosures prevent competitors from getting patents on unclaimed disclosures.






Patent Journey: From Idea to Protection

Patent Process Timeline



What Can You Patent?"

“Anything under the sun that is made by man.”
(*Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980))

Statutory Categories	Examples
Process (methods)	 Training Method: Virtual reality and physical exercises to enhance combat skills.
Machines	 Gadget Launcher: Machine to launch gadgets like grappling hooks.
Manufacture (products)	 Protective Armor: Lightweight, durable armor for protection and mobility.
Compositions of matter	 Healing Serum: Serum that accelerates healing.
Improvements thereof	 Upgraded Suit: Suit with temperature regulation and communication devices.



Identifying Inventions

 Sources	New product/component
New feature/function for existing product	Improvements to current feature/function
Meeting regulatory requirements	Control schema
Gathering/using information to do something	Manufacturing methods

When?

- Make it part of the business routine
- Project presentations
- Engineering/design change orders
- Product planning
- Quarterly catch-up
- Monthly or quarterly call with IP lawyer



Identifying Inventions

Focus on solutions to technical problems with a tangible benefit/advantage

Faster (lighter weight, more powerful)

Cheaper (more profitable; better price)

Easier to use (deployment; control)

More efficient (more power gen; less power draw)

More reliable / less prone to failure

Easier to repair



Focus on Solutions to Technical Problems



Look for Unexpected Results



Look for Solutions that Go Against Conventional Wisdom

Can You Protect the Way Something Looks?

- New and original
- Ornamental design
- Applied to article of manufacture

Nov. 6, 1990

Sheet 1 of 4

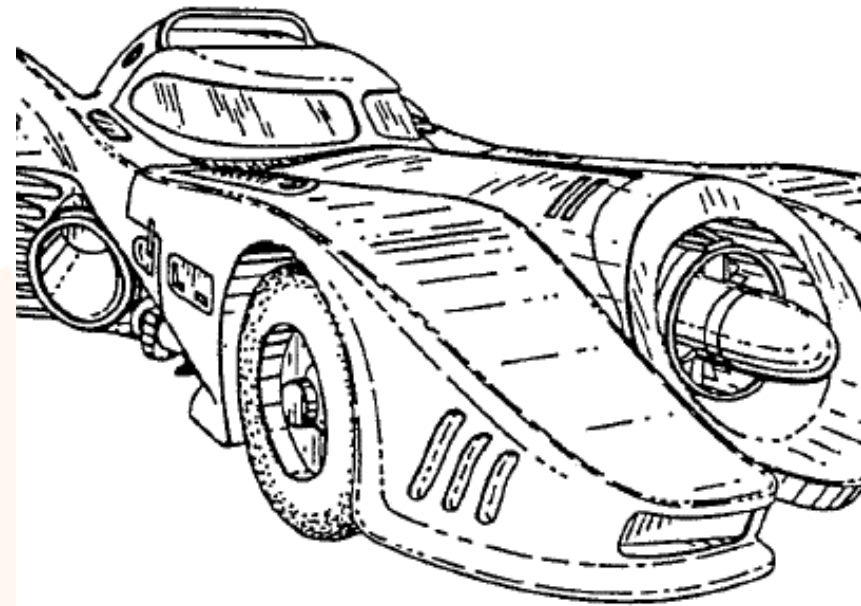


FIG. 1

Patent No-Nos

Prior Art

- Patent or printed publication Public use
- On sale
- Available to public
- US patents and published applications as of filing date, including foreign priority dates
- Press release
- Funding-related disclosures (w/o NDA)
- YouTube / website
- Published interviews
- Published abstracts (meetings, grants, etc.)
- Internet posts
- Public testing

Disclosure = no patent



No public disclosures any time before the application is filed (with some exceptions for inventor in US only).



No use/sale anywhere in the world.









Beware reverse “on-sale”



Requesting a supplier to build a product, even for internal use, may be an on-sale bar. It is an “offer for sale” of the invention by the supplier to the inventor

Patent application types

Type	Description	Term
Utility Patent Application: 	Protects new inventions or functional improvements to existing inventions.	Up to 20 years from nonprovisional filing
Design Patent Application: 	Protects the unique visual appearance of a product.	15 years from grant
Plant Patent Application: 	Protects new and distinct plant varieties.	20 years from filing
US Provisional Patent Application: 	Provides a temporary placeholder to secure a filing date.	12 months placeholder
US Non-Provisional Patent Application: 	The formal application for obtaining a patent.	20 years from filing
International Patent Application (PCT): 	Placeholder patent protection for protection in multiple countries through a single application.	Up to 30 months to enter national phases in foreign countries

Steps to Patent Your Invention

- **Step 1: Document Your Invention**

- Draw it, describe it, date it with a witness
- Use notes, lab notebooks

- **Step 2: Prepare Invention Disclosure Form**

- Internal, confidential form used to memorialize the invention.
- Purposes:
 - Record the invention in one place
 - Track the invention approval process
 - Assist the patent attorney in preparing the patent application

- **Step 3: Preparing and filing**

- Claims, drawings, specification
- Disclosure Requirements: How to make and use, fall back positions

- **Step 4: Prosecution of the application**

- Publication: 18 months
- Examination: 2-4 years
- Notice of allowance
- File Continuation/Divisional Applications
- Issuance: 2-4 years after filing
- Foreign filing decisions – one year from initial patent application

How Much Does It Cost?

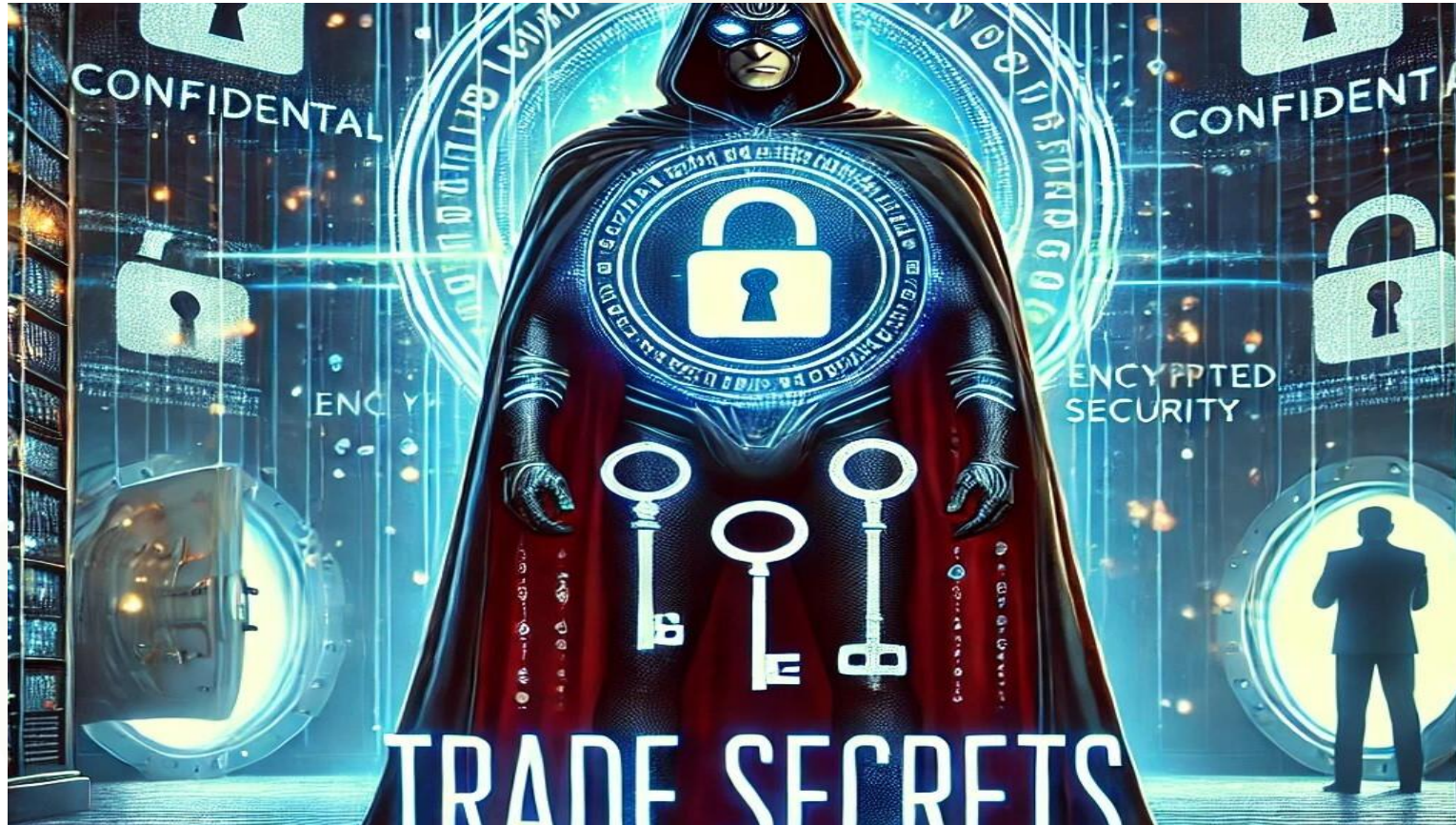
Activity	Fees/costs
Initial fees to prepare and file application	~\$10,000-\$20,000
USPTO filing charges	~\$900-\$1,800
Fees to respond to office actions/appeal	~\$5,000-\$15,000
USPTO charges to proceed to issuance	\$500-\$1,000
USPTO maintenance fees	~\$6,000-\$13,000

Approximately \$30,000+ over lifetime of patent



Best Practices to Safeguard Your Innovations

1. Do not disclose or sell the invention before filing an application.
2. Establish NDAs with outside entities before filing a patent application or submitting concepts to vendors/customers.
3. Ensure consulting agreements state company owns resulting IP and keep the legal department or attorney.
4. Avoid internal email correspondence on patent infringement and validity opinions; these are legal questions and may not be protected by attorney-client privilege in US litigation.
5. Contact attorney for questions on patent matters and limit email communications to factual matters.



 **Trade Secrets**

What it is, why it matters, and how to protect it!



What is a Trade Secret?

Information that derives independent economic value, is not readily ascertainable by proper means, and protected by reasonable security efforts

Customer Lists: Contacts of allies and informants, like Batman's network in Gotham.

Blueprints: Designs of superhero gadgets, such as Iron Man's suit schematics or Spider-Man's web-shooter plans.

Business Plans: Strategies for superhero operations, like the Justice League's mission plans or the Avengers' tactics.

Source Code: Programming for advanced AI systems, such as JARVIS in Iron Man's suit or the Batcomputer's software.

Quality Control Data: Performance metrics of superhero equipment, like the durability tests of Captain America's shield.

Formulas: Chemical compositions for superhero serums, like the Super Soldier Serum for Captain America.

Drawings: Concept art for superhero costumes, like the initial designs for Spider-Man's suit.

Test Records: Results from testing superhero abilities, such as the speed trials for The Flash.

Procedures: Protocols for emergency situations, like the Avengers' response plans for alien invasions.

Designs: Architectural plans for superhero bases, like the Batcave or the Fortress of Solitude.

Recipes: Special formulas for superhero gadgets, like the recipe for Spider-Man's web fluid.

What does that mean?

Independent Economic Value

- Information that gives you a competitive advantage.
- Substantial investment to develop.
- Something your competitors want.

Not Readily Ascertainable By “Proper Means”

- Discovery by independent invention.
- Discovery under a license from the owner.
- Observation of the item in public use or on public display.
- Obtaining the information from published literature.
- Discovery by “reverse engineering,” “decompiling” and/or “disassembly.”



Reasonable security efforts required

Why you need a trade secret protection program

If the Information is valuable, treat it as such

- Implement processes to define and protect trade secrets relating to existing or anticipated business.
- Safeguard its trade secrets by preventing disclosure to third parties, NDAs, pursue ex-employees or consultants who steal your trade secrets, monitor for possible theft or misappropriation.
- Restrict access to trade secrets or confidential information.



 **Battle of the IP**

Which way to turn?

Trade secrets v. patents

Patent	Trade secret
Lasts 20 years	Can last forever
Standard to obtain in high (“nonobvious”)	Quality of the info need not be high
Must apply to protect	Must take steps to protect (limit access)
Rights exclusive	Rights not exclusive
Cost to obtain high	Cost to obtain is nil
Time to obtain 2-5 years	Time to obtain is nil
Only the first inventor can get a patent	More than one company can own the same trade secret

Balancing act

Ask the following questions:

- Does it give you a competitive edge?
- If others had it, would it damage you?
- Can you keep it a secret and, if so, for how long?
- Is it key to your business?
- Is it too late to patent it?
- Can you reverse engineer it?
- What is the market life?

Patents & Software Inventions

- What to Patent? Unique features/advantages that differentiate you from your competitors
 - What has been technically challenging? Follow the FTEs and the \$\$\$\$. Why did you have to build it rather than buy it? Would others be willing to buy it from you? Consider or commercial vertical as well as others.
- How? Focus on the technical features that provide these advantages
- When? See above. But consider the possibility of filing multiple provisional patent applications and stacking them (must still file the non-provisional application by the anniversary of the first filed provisional application)
- Note: if a human can do “it,” it is not going to be patent eligible. When working with counsel to draft the application telling a story that explains why “it” was impossible before your invention

Patents & the US Government

- Be aware of the notice requirements and relative rights you have in your work when working with the US Government
- Depending on the nature of your contract, who it is with, how you are being paid and associated government regulations, there will be various notice requirements, and potential rights granted to the Government
- It may be valuable to ensure that your innovations are developed using non-US Government funds to ensure you have complete ownership of your technology
- Consider the concept of data rights as well as other IP in your contracting materials

Patents & Open Source Technology

- Primary concern is potential conflict between the exclusive rights granted by patent and the open nature of Open Source licenses
- Under Open Source, anyone can freely access, modify, and distribute the code, potentially leading to legal issues if a patented aspect is used without proper permission
- Risk of inadvertently incorporating patented technology into Open Source projects leads patent licensing complications that can eliminate or substantially risk your ability to commercialize your product that uses Open Source Technology

Is it Open Source or Something Else?

- Public Domain: creative works not protected by copyright, trademark, or patent
- Freeware: free to use without any fees or donations
 - No restrictions or expiration date
- Shareware: initially free or with limited features
 - Users encouraged to pay for continued access or additional features
- Open Source: software or other IP that is developed and shared openly
 - Anyone can use, change or share Open Source software

Open Source Can Get Complicated

- **Key Issues to Consider:**
- **Patent Infringement:** Developers working on Open Source projects could unknowingly use patented technology within their code, leading to potential lawsuits from the patent holder even if they were unaware of the patent
- **Patent licensing complexities:** Likewise, using Open Source material to implement part of a process requires navigating the licensing terms of a patent to ensure compatibility with an Open Source license. This particularly difficult when incorporation of that material may lead to inventorship issues
- **Community backlash:** Pursuing patents that utilize Open Source technology is generally considered negatively by the Open Source community

Open Source Licenses

- **Sets the legal framework that dictates how the Open Source Material Can be Used**
- **Permissive:** offers most flexibility by allowing modification and use of source code in proprietary projects without an obligation to share the derivative work. BSD License is one example
- **Copyleft:** require any derivative work to be distributed under the same license terms as the original software; thus, modifications must be made freely available to maintain the open source nature of the project; GPL is an example
- **Weak Copyleft:** require disclosure of source code modification; LGPL is a well known example
- **Public Domain:** waive all copyright and related rights; developers can freely use, modify, and distribute the code without any legal restrictions; CC0 licenses are an example

Consider the Plan?

- How are you going to use the code?
- Would you want others to be freely use your code?
- Do you want to be credited as the author?
- Are you comfortable with others developing, hosting, selling, or distributing your code? Is your customer comfortable with that?

What If My Customer is the US Government?

- **Short Answer:** it depends
- **Longer Answer:**
 - Government agencies have been encouraged to use Open Source Software (OSS) for projects, with many federal policies promoting its use, including the requirement to consider releasing custom-developed code as open source to increase transparency and collaboration (See OMB Memorandum M-16-21)
 - Theory is that OSS offers transparency, is cost-effective and provides a large pool of community support
 - However, you must consider and understand the careful consider Open Source license terms, security implications in your project's sensitivity, and any guidance provided by the customer
 - This involves understanding whether an OSS license aligns with your project's needs and government regulations, understanding the security footprint of the OSS, compliance with data privacy and sensitive information
- **Longest Answer:** Keeping legal counsel in the loop would be beneficial

Best Practice: Have a Plan

- **Understand to what extent you want to use Open Source material in your project**
 - Can you compartmentalize it? Keeping it separate may enable you to patent your technology while calling on separate OSS provided by others.
 - Consider whether there is a non-OSS substitute. It might not be as good as what you can get under OSS, but understanding its implications and relative value can help you determine how to go forward
- **Understand requirements of the Open Source License and whether it is compatible with your project and your customer's requirements**
 - For example, some LLMs are licensed with various application limitations. Be aware that you may not be able to use the OSS for what you want to use it for

  Thank You

Questions, ask away!



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UNITED STATES
PATENT AND TRADEMARK OFFICE



USPTO Startup and Small Business Resources

Elizabeth Dougherty

Regional Outreach Director

Northeast Regional Outreach Office

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UNITED STATES
PATENT AND TRADEMARK OFFICE ®

The USPTO is America's innovation agency

Committed to:

- Fostering innovation and economic growth
- Creating a reliable, predictable, and high-quality intellectual property (IP) system

uspto



*America's
Innovation Agency*

Discussion topics

- Introduction
- Resources of the USPTO
- Where to find help

Types of intellectual property



Patent

New, inventive ideas



Trademark

Identifies the origin of goods or services



Copyright

Creative expression stored in a tangible form



Trade secret

Any information that is valuable & kept confidential



What is a patent?

The right to **exclude others** from:

- making, using, selling, offering for sale, or importing the claimed invention
- Limited term
- Territorial: A U.S. patent provides protection only in the United States
 - No worldwide patents

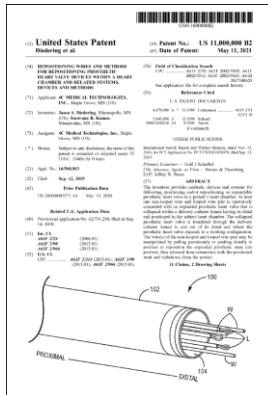


Types of patents

Utility

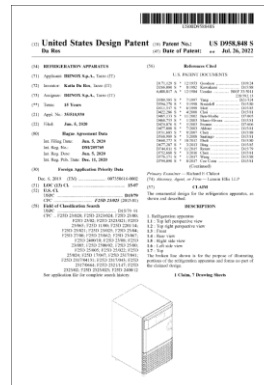
Protects how an invention works, functions, or is made for 20 years from filing date

- Process
- Machine
- Article of manufacture
- Composition of matter



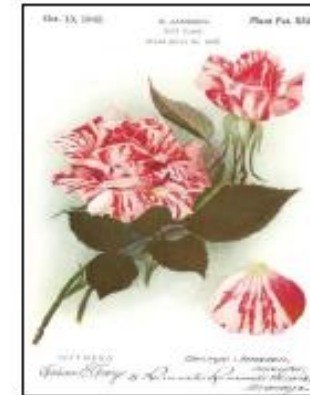
Design

Protects the way a product or article looks, the ornamental expression for 15 years from the date of grant



Plant

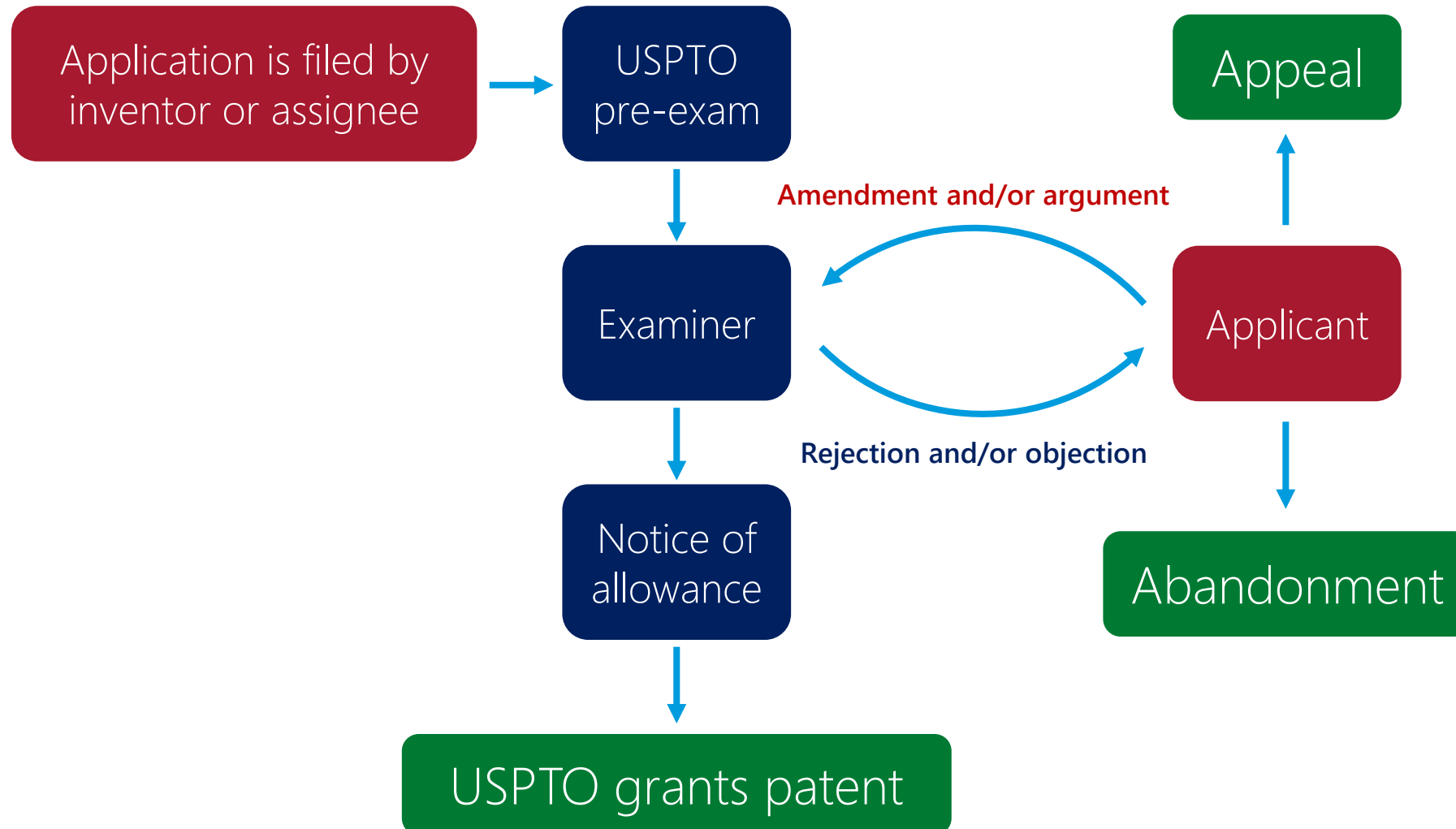
Protects newly invented strains of asexually reproducing flowering plants, fruit trees, and other hybrid plants for 20 years from filing date



Provisional vs. Non-Provisional Patent Applications

Provisional	Non-provisional
<ul style="list-style-type: none">• Not examined or published• One year time limit• Only for utility patents• A low-cost way to establish an early effective filing date (priority date) in a non-provisional patent application with few formalities	<ul style="list-style-type: none">• Examined• Published 18 months from earliest filing date (unless a request for a non-publication at filing)• Can become a patent

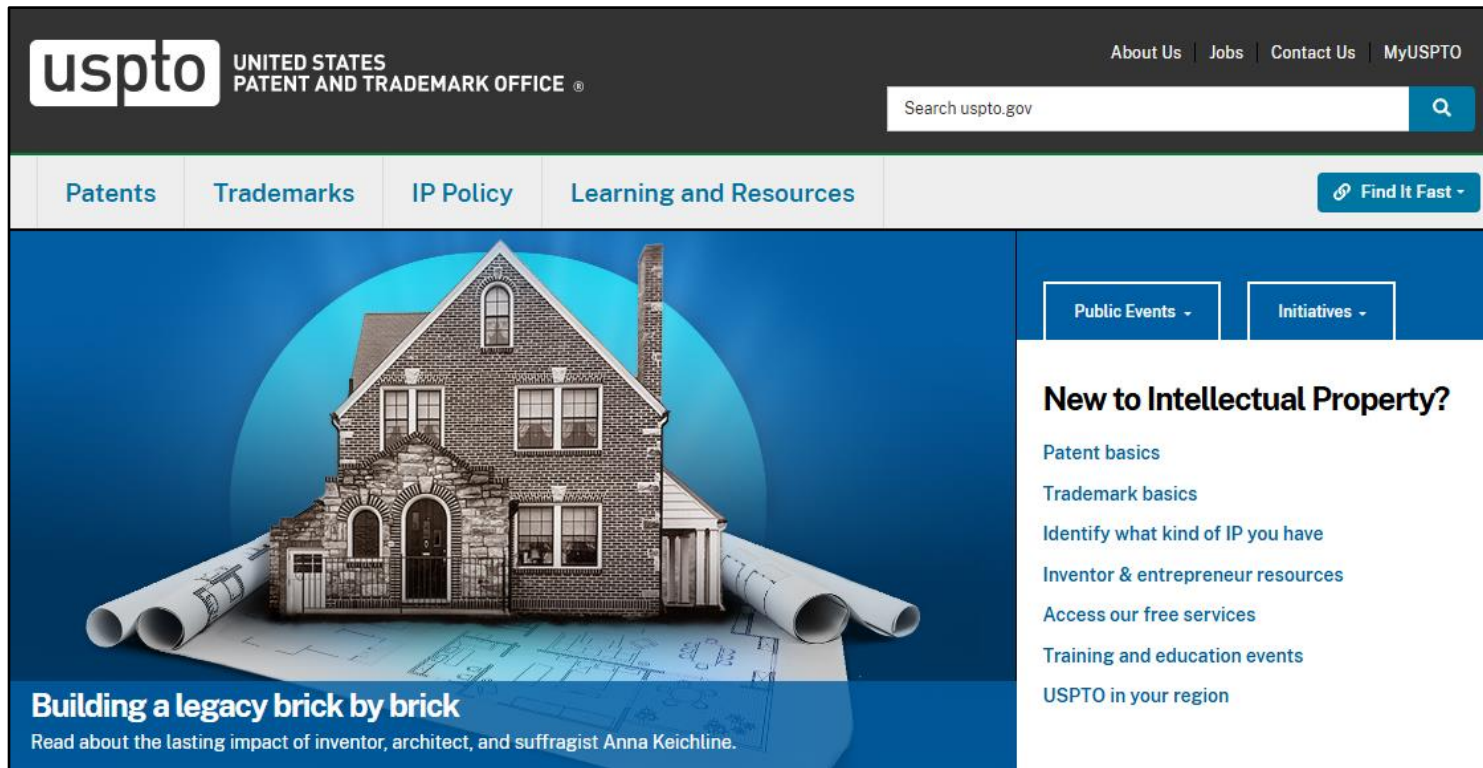
Patent examination



Discussion topic

Resources

Visit us at uspto.gov



The screenshot shows the USPTO website homepage. At the top left is the 'uspto' logo and the text 'UNITED STATES PATENT AND TRADEMARK OFFICE'. To the right are links for 'About Us', 'Jobs', 'Contact Us', and 'MyUSPTO'. A search bar with the text 'Search uspto.gov' is located below these links. A navigation menu contains 'Patents', 'Trademarks', 'IP Policy', and 'Learning and Resources', with a 'Find It Fast' button on the right. The main content area features a large image of a brick house with blueprints and the headline 'Building a legacy brick by brick'. Below this headline is a sub-headline: 'Read about the lasting impact of inventor, architect, and suffragist Anna Keichline.' To the right of the main image is a 'New to Intellectual Property?' section with a list of links: 'Patent basics', 'Trademark basics', 'Identify what kind of IP you have', 'Inventor & entrepreneur resources', 'Access our free services', 'Training and education events', and 'USPTO in your region'. Above this list are two buttons: 'Public Events' and 'Initiatives'.



Learn how to identify your type of IP

- The [IP Identifier](#) allows you to:
 - Identify your type of IP assets by answering six brief questions
 - Learn basic information about your identified IP
 - Save the information from your session and a tailored list of resources in a PDF format
 - Access links to other helpful information and resources

Find out more @
ipidentifier.uspto.gov



The screenshot shows the IP Identifier website interface. At the top, the USPTO logo and navigation links (About Us, Careers, Contact Us) are visible. The main heading reads "IP Identifier: Learn to identify and protect your intellectual property". Below this, there are several sections:

- Welcome:** A sidebar menu with links for "Basic IP Identifier", "Advanced IP Identifier", and "Tips for managing your IP assets".
- Feedback:** A section with a feedback icon and text: "Please use this brief survey to share your valuable feedback." and an email link: "ipidentifierfeedback@uspto.gov".
- Need Help?:** A section with a question mark icon and text: "If you need technical help with using the tool please email ipidentifierfeedback@uspto.gov".
- Where do I start?:** A main content area with the heading "Where do I start?". It contains introductory text: "Learn how to identify which of your creative ideas might be intellectual property assets and how to protect them by using the USPTO Intellectual Property (IP) Identifier." followed by a question: "Are you thinking about starting a business? Do you own one already? Or maybe you're an inventor, artist, or designer. Maybe you sell goods online or in a store or provide a service to others. If so, you may have **intellectual property**." and another question: "Do you know what types of IP you might have? Do you know how to protect them?". Below these questions are two radio button options: "No, I don't know what types of IP I have" and "Yes, I do know what types of IP I have".
- DISCLAIMER:** A small text block at the bottom stating: "The information provided in this website is for general information purposes only and does not constitute legal advice. When filing an application for obtaining specific IP rights, you may benefit from professional legal assistance. While the USPTO cannot aid in the selection or recommendation of an attorney or agent, a list of active patent practitioners is available from the Office of Enrollment and Discipline. This IP Identifier contains links to third-party websites. The USPTO is not responsible for the material found therein. Please review the Links Policy for more information."



Access our free services



Filter by:

[Reset](#)

All (46)

[Patents \(40\)](#)

[Trademarks \(28\)](#)



I need help with this topic:

- All topics
- Learning the essentials
- Preparing to file
- Applying for protection
- Amending or appealing an application
- Maintaining your protection
- Protecting your rights abroad

AccessUSPTO

Get your national organization connected to the USPTO's free services that can help them grow their business.

[Learn more >](#)

Learning the essentials



Application Assistance Unit (AAU)

Get help with questions or issues related to the pre-examination and post-examination processing of patent applications.

[Learn more >](#)

Preparing to file

Applying for protection

Maintaining your protection











www.uspto.gov/FreeServices

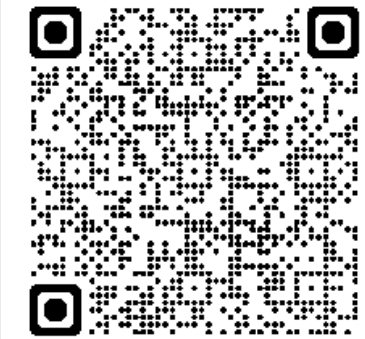


Access inventor and entrepreneur resources

- USPTO's hub for resources and information for inventors, entrepreneurs, and small businesses.

Inventor and entrepreneur resources

 Get started Learn about types of intellectual property (IP) and how to protect your idea or product. <ul style="list-style-type: none">> Types of IP protection> Attend a free training> Patents basics> Trademark basics	 Before you apply Search existing patents and trademarks to find out if your idea is unique. If it is, create an account. <ul style="list-style-type: none">> Search patents> Search trademarks> Create an account to apply	 Get help to apply Set yourself up for success by learning via USPTO's free resources and find expert help. <ul style="list-style-type: none">> Find resources near you> Watch our videos ↗> Find a patent attorney> Do I need a trademark attorney?	 Apply for IP rights Submit your application for a patent or trademark. See if you qualify for reduced patent fees. <ul style="list-style-type: none">> Apply for a patent> Apply for a trademark> Costs to file> Reduced patent fees
 After you apply As your patent or trademark is examined you may need to take additional steps. <ul style="list-style-type: none">> Check application status> Respond to a Patent decision> Prepare for a patent interview> Respond to a Trademark decision	 Appeal or fix an issue An applicant may petition a procedural rule or issue, or appeal a patent rejection or trademark refusal. <ul style="list-style-type: none">> Learn about patent petitions> Learn about patent appeals> Learn about trademark petitions> Learn about trademark appeals	 Entrepreneur resources Learn about small business resources at the USPTO and other federal agencies. <ul style="list-style-type: none">> Startup resources> License or sell your IP> Change patent owner> Change trademark owner> Other federal resources	 Protect yourself Don't be misled by false claims, scams, or companies saying you need their services. <ul style="list-style-type: none">> Known patent scams> Known trademark scams> Register a complaint



uspto.gov/inventors



Access resources for startups

The USPTO's hub for startup resources can help you address the intellectual property (IP) challenges specific to startups, including securing funding and guarding against costly infringement litigation.

Where to start?

Our [startup certificate training course](#) gives an introduction to IP, cybersecurity for businesses, and scam prevention. The two-hour virtual session is intended for entrepreneurs and small business owners looking to learn the essentials on the go.

More for inventors and entrepreneurs

For information on IP fundamentals, such as filing a patent or registering a trademark, check out [these resources for inventor and entrepreneurs](#).

Here you will find practical information and useful tools, available from a wide variety of government agencies, including the [Small Business Administration \(SBA\)](#), the [Minority Business Development Administration \(MBDA\)](#), and [Small Business Development Centers \(SBDCs\)](#). These agencies can assist you at every stage of growing your business, from your initial idea to entering the global marketplace.



Protect your IP

Protection for your intellectual property (IP) can help your business succeed and attract investors.

- > Identify the kind of IP you have
- > Protect your IP in the U.S.
- > Protect your IP abroad
- > Fight costly counterfeits
- > Access IP training modules in five languages
- > Access resources for small and medium-sized enterprises
- > Trademark Basics Boot Camp



Plan for success

Explore free government resources that can help you create a foundation for business success.

- > Learn the steps to start your business
- > Find a MBDA Center in your state
- > Get free business counseling near you
- > Access our free services



Find federal funding

While the USPTO does not provide source funding, there are many sources of startup funding, including grants, loans, and different kinds of investors.

- > Choose the right funding
- > Search federal grants
- > Learn about America's Seed Fund
- > Access SBA loans
- > Review additional funding resources



Engage with experts

Find mentors, partnerships, and technological assistance in your industry. Learn to navigate the domestic and international IP markets.

- > Get free advice from business experts at SCORE
- > Get help with manufacturing your technology
- > Use IP attachés to navigate the global market
- > Attend a Path to a Patent program

uspto.gov/startups



Reduced patent fees

Small Entity

- 60% reduction in most patent fees
- Must be an individual or
- A small business (less than 500 employees) or a non-profit organization

Micro-Entity

- 80% reduction in most patent fees
- Meet small entity requirement
- Filed no more than 4 previous applications
- Income not greater than 3x median income
- Not assigned to other than a micro-entity
- Inventions assigned to employer don't count against you

For more information on Micro Entity: <https://www.uspto.gov/patents/laws/micro-entity-status>



First-Time Filer Expedited Examination Pilot Program



- This pilot program is part of CI²'s efforts to increase accessibility to the patent system for inventors who are new to the patent application process, including those in historically underserved geographic and economic areas.
- The program expedites the first office action for program participants.
 - Expediting the first office action reduces time-based barriers for inventors who may otherwise be unable to participate in the patent system.
- This pilot program also aligns with and supports Executive Order 13985, dated January 20, 2021, and advances the efforts of the USPTO and CI² to create more equity and diversity in innovation.
- The USPTO will accept up to 1,000 qualifying applications until March 11, 2024, subject to its discretion to terminate sooner.



Need patent protection fast?



Need to FAST track your patent? Use Track One!
Move your ideas quickly with USPTO's Track One

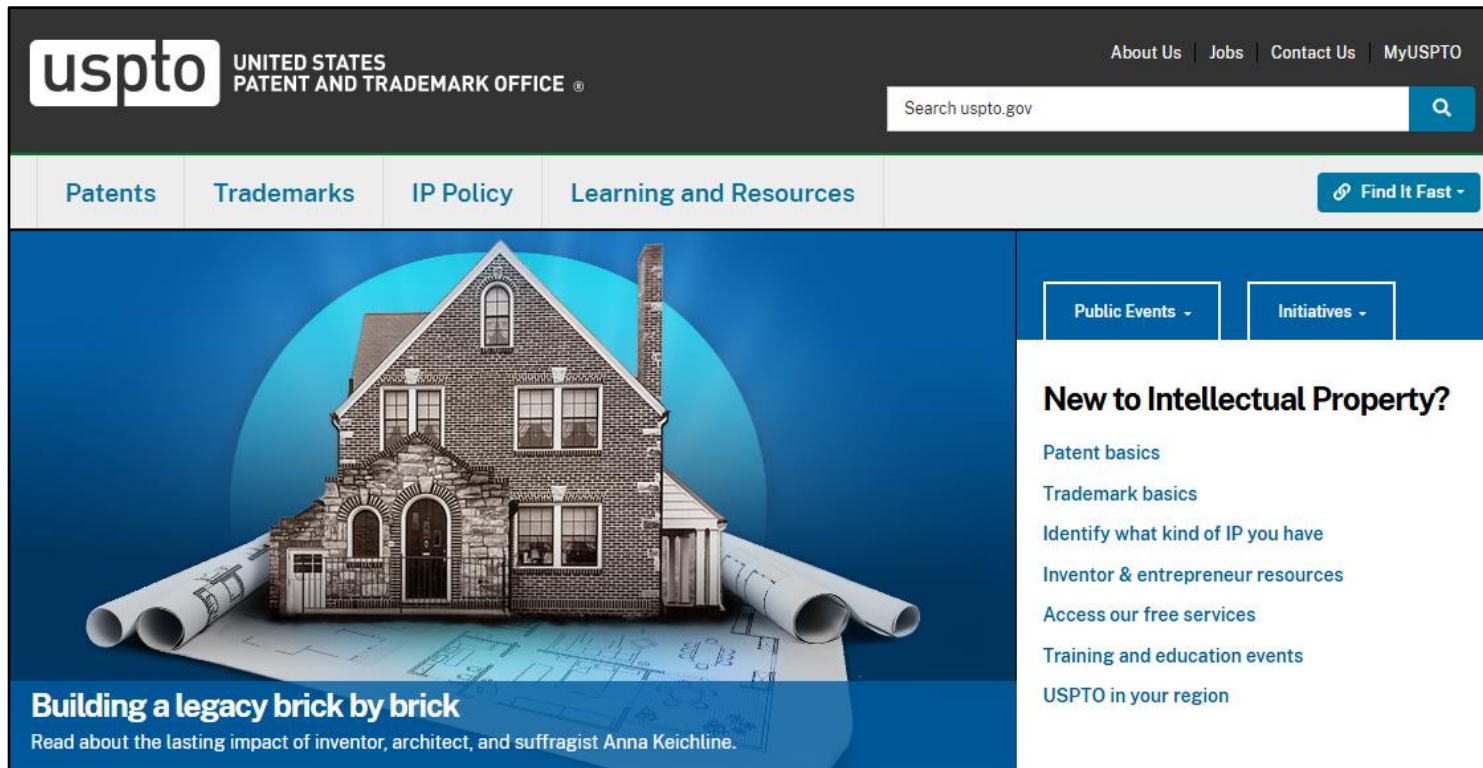
www.uspto.gov/patent/initiatives/usptos-prioritized-patent-examination-program



Discussion topic

Where to find help

Visit us at uspto.gov



The screenshot shows the USPTO website homepage. At the top left is the 'uspto' logo and the text 'UNITED STATES PATENT AND TRADEMARK OFFICE'. To the right are links for 'About Us', 'Jobs', 'Contact Us', and 'MyUSPTO'. A search bar with the text 'Search uspto.gov' is located below these links. A navigation bar contains 'Patents', 'Trademarks', 'IP Policy', and 'Learning and Resources', with a 'Find It Fast' button on the right. The main content area features a large image of a brick house with blueprints and the headline 'Building a legacy brick by brick'. Below this headline is a sub-headline: 'Read about the lasting impact of inventor, architect, and suffragist Anna Keichline.' To the right of the main image is a 'New to Intellectual Property?' section with a list of links: 'Patent basics', 'Trademark basics', 'Identify what kind of IP you have', 'Inventor & entrepreneur resources', 'Access our free services', 'Training and education events', and 'USPTO in your region'. Above this list are 'Public Events' and 'Initiatives' buttons.



USPTO locations

The United States Patent and Trademark Office (USPTO) operates a headquarters and Northeast Regional Outreach Office in Alexandria, Virginia, and four additional regional outreach offices across the nation. Combined with our examining corps, our outreach offices provide inventors, entrepreneurs, and small businesses with a USPTO presence in every U.S. time zone. For more information on how to contact our USPTO offices and business centers, visit our [Contact us page](#).

Additionally, we designate libraries across the country and U.S. territories as [Patent and Trademark Resource Centers](#) (PTRCs), which offer public access to products and services, patent and trademark training, and reference assistance and outreach.

Select a state on the map or use the search tool below to find a USPTO location or PTRC near you. We suggest calling ahead of your visit for hours of operation, services, and fees. Please make sure you're familiar with and abide by our [USPTO removable media policy](#) when visiting a USPTO location.

Find a USPTO location [Reset](#)

All regions

Search by state

USPTO Headquarters

Alexandria
600 Dulany St.
Alexandria, VA
800-786-9199
usptoinfo@uspto.gov



Visit a Patent and Trademark Resource Centers (PTRCs)



Nationwide network of public, state, and academic libraries that are designated by the USPTO to disseminate patent and trademark information and to support intellectual property needs of the public.

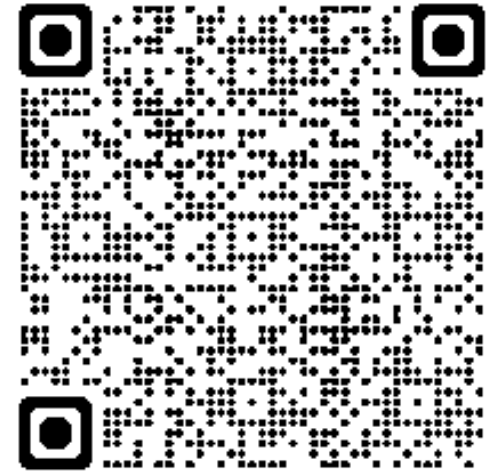


uspto.gov/PTRC



Check out free legal assistance programs*

- **Patent Pro Bono Program** - a nationwide program matching financially under-resourced inventors and small businesses with volunteer patent practitioners to file and prosecute patent applications.
 - [uspto.gov/probonopatents](https://www.uspto.gov/probonopatents)
 - probono@uspto.gov
- **Law School Clinic Certification Program** - permits law students under the supervision of a participating law school clinic's supervisor to practice patent and/or trademark law before the USPTO while providing those services to applicants, *pro bono*.
 - [uspto.gov/lawschoolclinic](https://www.uspto.gov/lawschoolclinic)
 - lawschoolinformation@uspto.gov



**Applicant(s) are not charged for legal services, but must pay all USPTO fees and any additional costs that may arise*



Learn how to file a patent application

- Pro Se Assistance program provides outreach education to applicants (also known as "pro se" applicants) who file patent applications without the assistance of a registered patent attorney or agent.



uspto.gov/prosepatents



Inventors Assistance Center (IAC)

- The Inventors Assistance Center (IAC) provides patent information and services to the public. The IAC is staffed by former supervisory patent examiners and experienced former primary examiners who answer general questions concerning patent examining policy and procedure.

Monday – Friday,
8:30 a.m. – 8 p.m. ET,
except federal holidays

- 800-PTO-9199
(800-786-9199)
- 571-272-1000

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Home > About Us > Events

Events

You are currently viewing events in all locations. View only events from:

USPTO headquarters Eastern region Midwest region Rocky Mountain region Texas region West Coast region

Timeframe: Future Events

USPTO ONLINE EVENT EVENT SERIES Trademark Basics Boot Camp

PROUD INNOVATION EVENT SERIES Proud Innovation Program for LGBTQIA+ independent inventors

June 2022

- All Topics: 73
 - Patents: 28
 - Trademarks: 15
 - General: 59
 - Technical: 1
- All Event Types: 73
 - Public Events: 72
 - Changes to Law and Policy: 4
 - Guidance / Training: 34

28	Learn how examiners approach 35 U.S.C. § 103 examining evidence	Virtual	9:00 a.m. ET
28	Aprenda como proteger su tecnología en el extranjero	Virtual	12:00 p.m. ET
28	Agents and attorneys: Professional responsibility and practice before the USPTO	Virtual	1:00 p.m. ET
28	Attend DOCX filing training	Virtual	2:00 p.m. ET
28	Learn how to protect your technology abroad	Virtual	2:00 p.m. ET
28	The Hand of History-The Mind of the Inventor Session 4: Toys, umbrellas, and more	Virtual	3:00 p.m. ET
28	Intellectual property webinar for K-12 educators	Virtual	6:00 p.m. ET
29	Learn how examiners approach 35 U.S.C. § 103 examining evidence	Virtual	1:00 p.m. ET
29	AI/ET Partnership Series #1: Kickoff – USPTO AI/ET activities and patent policy	Virtual	1:00 p.m. ET
29	K-12 IP education office hours	Virtual	3:00 p.m. ET
30	Attend DOCX filing training	Virtual	1:00 p.m. ET

uspto.gov/events



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- USPTO news and updates
- USPTO events
- Patent Alerts
- Trademark Alerts
- Copyright Alerts

UNITED STATES PATENT AND TRADEMARK OFFICE
uspto

Patent Alert

USPTO extends Patent Prosecution Highway pilot program with Mexico

To reduce pendencies and lower barriers to international patent protection, the United States Patent and Trademark Office (USPTO) extended its Patent Prosecution Highway (PPH) pilot program with the Mexican Institute of Industrial Property until June 30, 2027.

The PPH program enables an applicant who receives a positive ruling on patent claims from one participating office to request accelerated prosecution of corresponding claims in another participating office, allowing the applicant to obtain a patentability decision in the second office more quickly. More information on the PPH program is available on the USPTO's [PPH webpage](#).

The full text of the notice is available on the USPTO's [Patent Related Notices webpage](#).

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www.uspto.gov/blog

[www.youtube.com/
user/USPTOvideo](http://www.youtube.com/user/USPTOvideo)



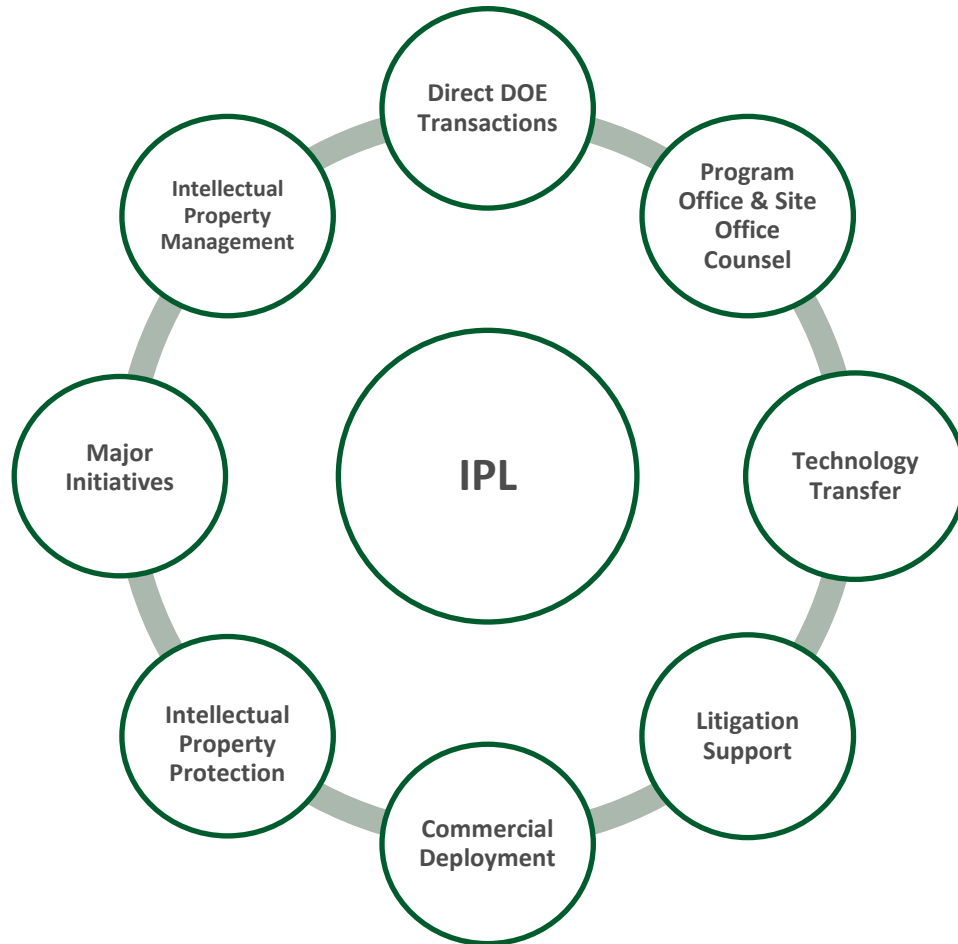
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Questions?



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Intellectual Property Law (IPL)



Protecting Intellectual Property: DOE Reporting, Partnerships, and Commercialization
March 4, 2025

Michael J. Dobbs
Deputy Chief Counsel -- Intellectual Property Law (IPL)
U.S. Department of Energy
Mike.Dobbs@science.doe.gov Tel: (331) 465-1317

Disclaimers – Consult your Attorney and [Award Terms](#)



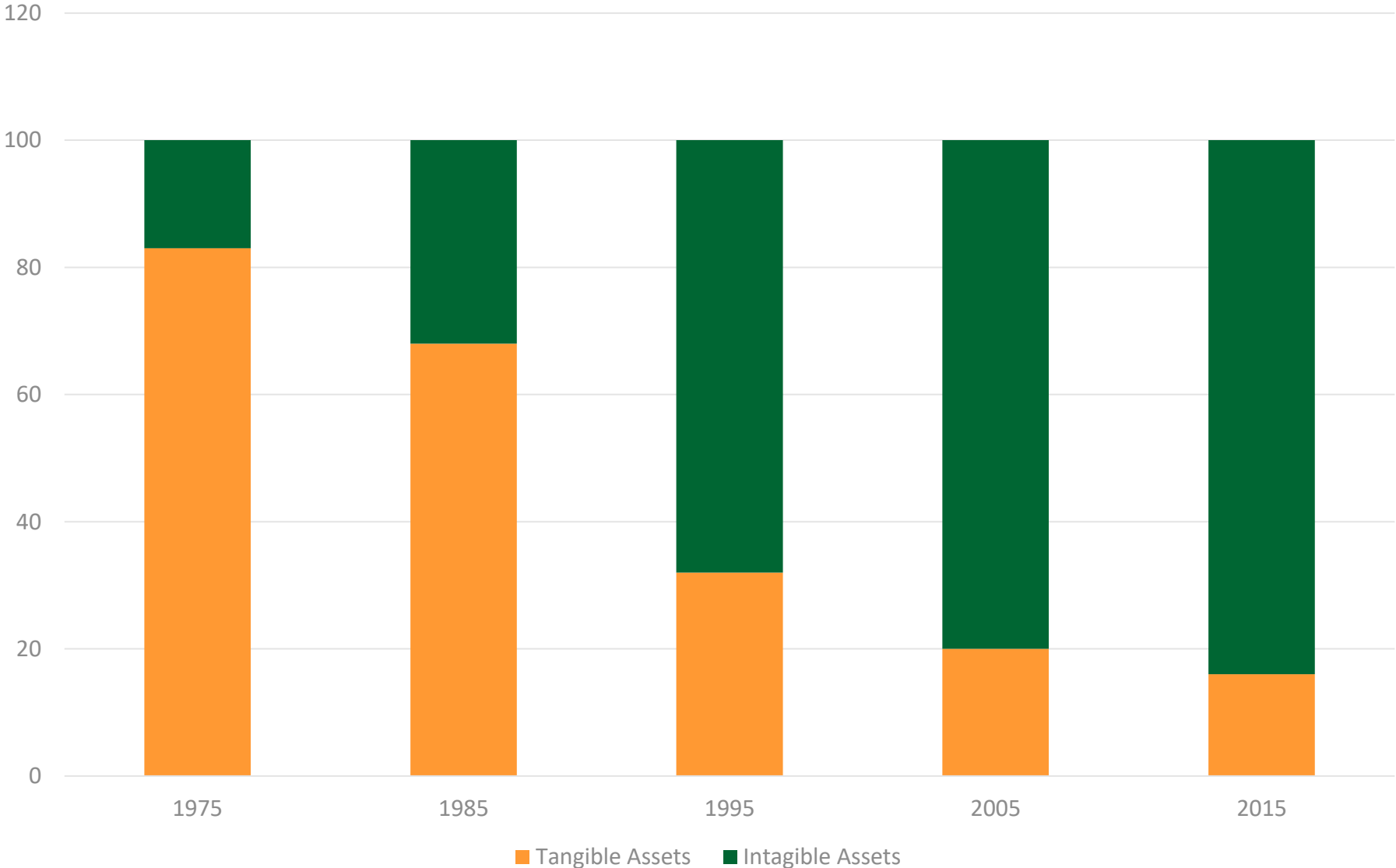
Legal Representation: This presentation includes information about legal issues and legal developments for informational purposes only. These informational materials are not intended, and should not be taken, as legal advice on any set of facts or circumstances. You should contact an attorney for advice on specific legal problems.

Review your award terms, the [SBA's Policy Directive](#) and the applicable laws and regulations with your legal counsel!



Personal Views and Opinions: The views and opinions expressed in this presentation are those of the author and do not necessarily reflect the official policy or position of any agency of the U.S. Government.

S&P 500 Market Valuation



Agenda



Manage Your Intellectual Property



Manage Your Relationships



Manage Expectations



Manage Your Agreements (Especially, Federal Awards)



Consider Partnering with a National Laboratory

Manage Your Intellectual Property

- Where are your inventions and data?
 - Employees?
 - Mind?
 - Personal Notes?
 - Shared Drive?
 - Social Media?
 - Emailed to your competitors without any protection?
 - Github?
 - Released by an employee or former employee under and open-source license?
- Who owns your employees' inventions and data?
 - See Stanford v. Roche.

Manage Your Intellectual Property: Mistakes

- Loss of Patent Rights or Narrower Patent Scope
 - Bar Date
 - U.S. has one year “grace period” (35 USC 102(b)). Most other countries do not have a grace period.
 - First to File
 - You pay royalties on your invention which you invented first, but your competitor filed first.
- Infringement
 - Incorporating third party copyrighted material.
 - Not performing freedom to operate reviews to avoid patent infringement. Consider using Technical and Business Assistance (TABAs) (15 USC 638(q)) funds (\$6,500 Phase I; \$50,000 Phase II) .

Manage Your Intellectual Property: Joint Inventions



Manage Your Intellectual Property

- Use employee agreement to ensure patent and data rights are assigned to your company. This is also a requirement of your federal award (37 CFR 401.14(f)(2)).
- Have a process for timely receiving invention disclosures and securely storing them.
 - Consider using Technical and Business Assistance (TABAs) (15 USC 638(q)) funds (\$6,500 Phase I; \$50,000 Phase II)
- Promote a culture to protect your intellectual property.
 - Who approves releases.
 - Consider trade secret, copyright and patent protection in consultation with your legal counsel.
 - Consider a non-disclosure agreement (NDA) in consultation with your legal counsel.
 - Properly mark data shared with federal agencies (SBIR/STTR Protected Data)
 - Avoid inventions with outside parties. See managing relationship and expectations.
- Keep lunches with outside parties light! Do not discuss inventions or solve problems (aka make inventions).

Manage Your Relationships

- Do you want to work with this entity?
 - Who has the key intellectual property?
- Do this entities interests align with your interests?
 - Who wants to use the key intellectual property?
- Do the parties need each other (aka mutually beneficial)?
- Do you trust this entity and its employees?



Manage Expectations

- Who will commercialize?
 - How will all the parties benefit?
- Who will pay what costs?
 - Patent costs?
 - Further R&D?
- How are jointly funded inventions promoting effective commercialization while mitigating delays (e.g. further negotiations).

Manage Expectations: Intellectual Property Management Plan



**Consider Intellectual Property Management Plan (IPMP) to address these consideration.
The IPMP should align the interests of all parties to successful commercialization
(win-win)!**

STTR Considerations

- DOE Certification Form: [Certification for Property and Commercialization Rights Agreement](#)
- DOE Model Agreement Form: [Allocation of Intellectual Property Rights and Rights to Carry Out Follow-on Research, Development, or commercialization](#)
 - The research institution will retain title to their inventions. Therefore, the allocation of intellectual property rights should provide for at least an option to negotiate a non-exclusive license in any inventions by the research institution.
 - Know-how: Does your agreement (e.g. statement of work) consider the transfer of know-how from the research institution to your business.
 - Equipment: How is personal property is retained, by you or the research institution.
- **Consider working with your counsel to use a robust IPMP covering all current and future work.**

Selling to the Government

- Phase III Awards ([DOE's Guidance](#))
 - Preference to work with SBIR/STTR Recipient
 - Maintain SBIR/STTR Protected Data
- While preference is given to a small business under the SBIR/STTR programs, the Government could use another vendor to provide the good/services.
 - Government License to Government funded patents
 - Government policy to only pay once. (Either royalties or funding the invention)
 - Allows the Government to use Government funded inventions royalty free.
 - Includes Government contractors
 - Government use of patents not funded by the Government.
 - Limited to reasonable royalties
 - May include Government contractors (Authorization and Consent)
 - Government license does not include free labor/work.

Manage Award Terms

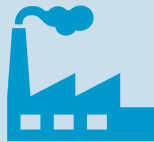
- Incorporate Patent Rights GTC-0024 in all R&D subcontracts (except DOE Laboratories)! The IPMP should be separate.
- Report all inventions to the funding agency (e.g. DOE) ***within two months***. Sign-up for [iEdison](#) now!
- Elect title to inventions you wish to keep and provide utilization reports annually.
- Report filed patent applications in iEdison.
- Respond to iEdison notifications and have multiple accounts to handle staff changes.
- Contact Chicago-IP@science.DOE.gov if you have questions on reporting your inventions.
- Use NDAs.
- Use the SBIR/STTR DATA RIGHTS marking for Government deliveries.
- Follow the [requirement](#) to substantially manufacture in the U.S.

U.S. Competitiveness – Substantially Manufactured in the U.S.



Consult FOA, Award Terms and DOE Guidance

[U.S. Manufacturing | Department of Energy](#)
[Frequently Asked Questions \(FAQs\) | Department of Energy](#)



Requires substantial U.S. Manufacture of Subject Inventions

For products embodying or produced through a subject invention (e.g. methods or manufacturing apparatus)
Additional requirement from U.S. Preference (35 U.S.C. 204)



DOE will accept and consider all applications for a clarifications, waiver or modification with business justification

DOE recognizes the need for flexibility and expects to modify the U.S. Competitiveness Provision in certain situations. DOE may grant waiver or modification requests. At this time, petitions for a waiver or modification of U.S. manufacturing requirements should be sent to GC-62@hq.doe.gov.

Consider Partnering with a National Laboratory

- As a subcontractor to your SBIR/STTR award
 - [DOE SBIR/STTR Strategic Partnership Projects \(SPP\)](#)
- Privately funded work under a Strategic Partnership Project (SPP)
 - Sponsor pays full cost but retains all patent rights in lab inventions and all data rights (proprietary).
 - Negotiable
- Cooperative Research and Development Agreement
 - Typically, each party retains their own inventions.
 - Participant has a statutory right to negotiate a license in lab inventions.
 - Data protection (5-30 years)
 - Negotiable
- User Facility
 - Non-proprietary
 - Free to use but must publish
 - User retains rights to their inventions.
 - Proprietary
 - User pays for use of facility, but retains all data rights (proprietary)
 - User retains rights to their inventions.

Technology Transfer Mechanisms at DOE Facilities

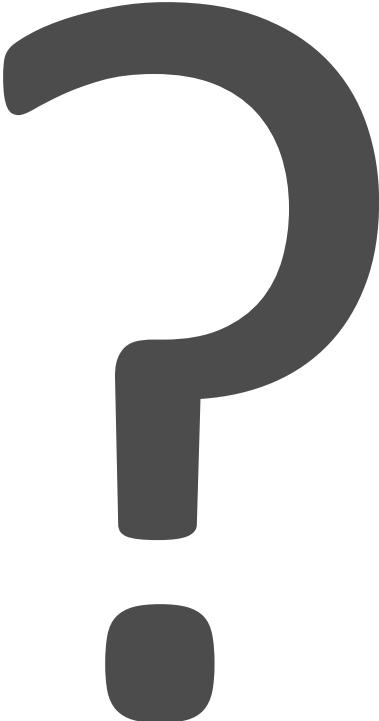


Agreement	Use	Funding	Subject Inventions	Generated Data	U.S. Competitiveness	Cost	Highlights
Cooperative Research and Development Agreement (CRADA)	Collaborative research between DOE Labs and public and/or private entities for the mutual benefit of the parties	Private and/or Federal funds	Lab and Participant may elect their own inventions and Participant has right to negotiate exclusive license to Lab inventions	Protected for up to 5 years	Products embodying IP resulting from CRADA shall be manufactured substantially in the U.S.	Lab and Participant may share costs or Participant pays 100% funds-in	<ul style="list-style-type: none"> ✓ Collaborative research ✓ 5 year data protection ✓ Designed for multi-party collaborative research
Strategic Partnership Project (SPP)	Work for businesses and other non-federal entities using highly specialized or unique DOE facilities, services or technical expertise	Private funds	Sponsor may elect title to Subject Inventions ¹	Protected as Sponsor's proprietary data w/limited exceptions ^{1,2,3}	U.S. Preference: Sponsor agrees not to grant any party exclusive right to use or sell products embodying Subject Inventions in the U.S. unless products are manufactured substantially in the U.S.	Sponsor pays full cost recovery	<ul style="list-style-type: none"> ✓ Sponsor typically retains right to elect title to subject inventions ✓ Generated data treated as proprietary ✓ Option for limited Gov. R&D license³
		Federal funds	Lab may elect title to Subject Inventions of the Lab	Unlimited Gov. rights or flow down of SBIR/STTR Data	U.S. Preference (see above)	Sponsor pays full cost recovery	<ul style="list-style-type: none"> ✓ Access to unique facilities and expertise using federal funds ✓ Streamlined SBIR/STTR Preapproved Model may be available
Agreements for Commercializing Technology (ACT)	Work for businesses and other non-federal entities using highly specialized or unique DOE facilities, services or technical expertise	Private funds	Initial title to the designated IP Lead. (ACT Participant or Lab Contractor)	Protected as proprietary data w/limited exceptions ^{1,2,3}	U.S. Preference (see above)	Participant pays full cost recovery <u>plus</u> additional negotiated compensation to the Contractor	<ul style="list-style-type: none"> ✓ Flexibility for addressing indemnity & adv. payment ✓ Negotiable IP terms ✓ Optional performance guarantee ✓ Option for limited Gov. R&D license³
Proprietary User Agreement ⁴	User may access designated facilities to conduct its own proprietary research	Private funds	User may elect title to its Subject Inventions	User may protect as proprietary	n/a	User pays approved user rate	<ul style="list-style-type: none"> ✓ Generated data treated as proprietary ✓ Merit based access to unique facilities
Non-Proprietary User Agreement ⁴	Non-proprietary research at designated facilities	n/a	Lab and User may elect their own Subject Inventions	Unlimited Gov. Rights	U.S. Preference (see above)	Each party covers own cost	<ul style="list-style-type: none"> ✓ Merit based access to unique facilities ✓ Agree to publish results.

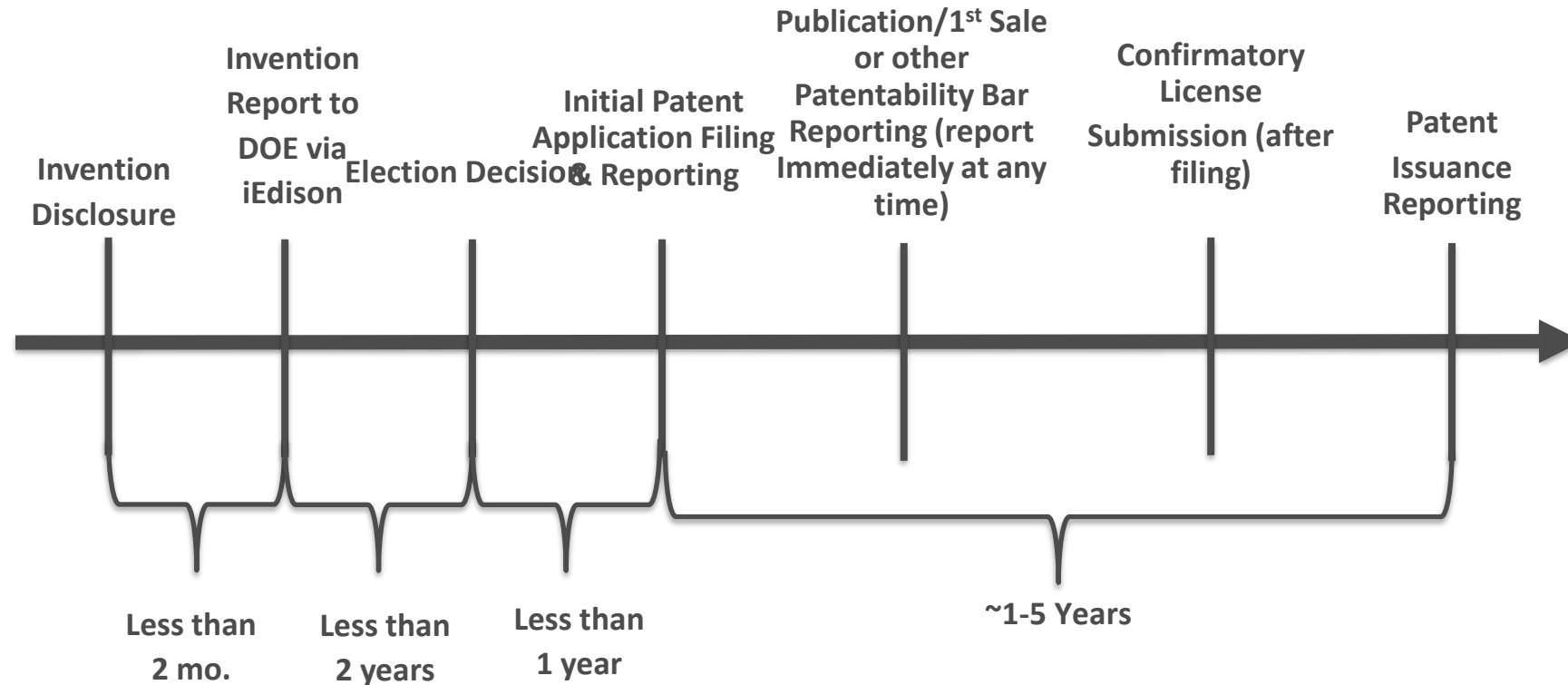
¹ Certain exceptions or restrictions may apply (e.g. foreign SPP Sponsors may be granted the right to elect title to inventions and receive proprietary data protection but only after the approval of DOE field patent counsel and concurrence from the cognizant DOE program office).² Proprietary data protection may not be available at all facilities. ³ If the limited Gov. R&D license is utilized, data protection will be limited to 5 years. ⁴ User Agreements are only available when the Sponsor/Participant/User is proposing to use a DOE Designated User Facility that offers such agreements. (see, <http://technologytransfer.energy.gov/docs/designateduserfacilities.html>)



Questions?



Invention Reporting Timeline



- **DOE may extend any due dates (including invention reporting) with substantive justification.*
- *** DOE may pursue patent protection on unreported, unelected, or abandoned inventions.*

Key Take-Aways



- Managing your IP should be part of your business routine; intangible assets are becoming more and more significant in valuations
- Keep things confidential – include IP clauses in all agreements; make reasonable efforts to secure trade secrets
- Consider holding a patent examiner interview
- **Many free programs** available through USPTO; see if you qualify as a small or micro-entity for reduced patent fees
- Have an invention process and make use of employee agreements – “**don't let your IP leak out the window!**”
- Use **TABA funds!** for IP due diligence and patents



Driving Growth & Revenue through Open Source Software

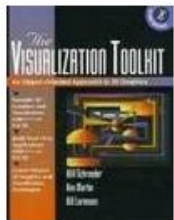
Lisa Avila Kitware, Inc. March 4, 2025

Overview

- ◆ The Initial Plan
- ◆ What Actually Happened
- ◆ The Question Everyone Asks Us
- ◆ Open Source Success Stories
- ◆ Where Are We Now?
- ◆ Things We Learned Along the Way

The Initial Plan

It Started With a Book and an Open Source Toolkit



A screenshot of the ThriftBooks website. The page displays the book 'The Visualization Toolkit' by Ken Martin, Bill Lorensen, and William Schroeder. The price is listed as \$4.19, with a list price of \$99.00. The page includes a search bar, navigation links, and an 'Add to Cart' button.



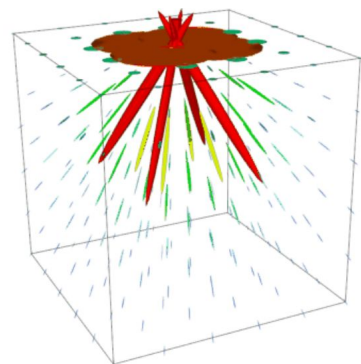
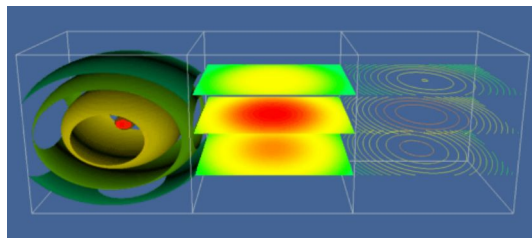
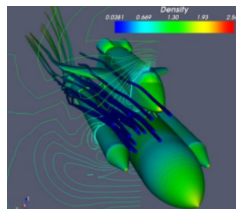
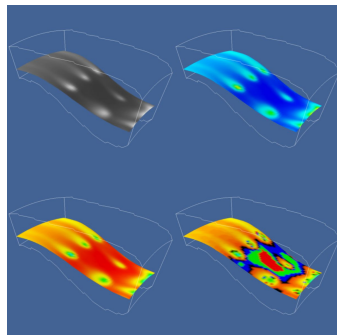
Book Overview

The aim of this text is to strike a balance between practice and theory. The book goes beyond description and focuses on application of visualization to real-world problems.

First Edition: The
Visualization Toolkit-
An Object-oriented
Approach... by
Schroeder,

\$104.26

Biblio.com



And a Business Plan

Identify key verticals

Develop targeted products

Keep that product code proprietary

Using licensing to generate revenue



And a Phase I SBIR from DoD

Graphical Visualization Framework for Representing Uncertainty in Dynamic 3-Dimensional Data

 Print

Award Information

Agency:

Department of Defense

Contract:

N/A

Amount:

\$94,251.00

Solicitation Year:

N/A

Phase:

Phase I

Solicitation Topic Code:

N/A

Branch:

Air Force

Agency Tracking Number:

40722

Program:

SBIR

Solicitation Number:

N/A

Awards Year:

1998

Small Business Information

Kitware, Inc.

6 Equinox Ct., Clifton Park, NY, 12065

DUNS:

N/A

HUBZone Owned:

N

Woman Owned:

N

Socially and Economically Disadvantaged:

N

Principal Investigator

Name: Dr. William J. Schroeder
Phone: (518) 393-2142

Business Contact

Phone: () -

Research Institution

N/A



What Actually Happened

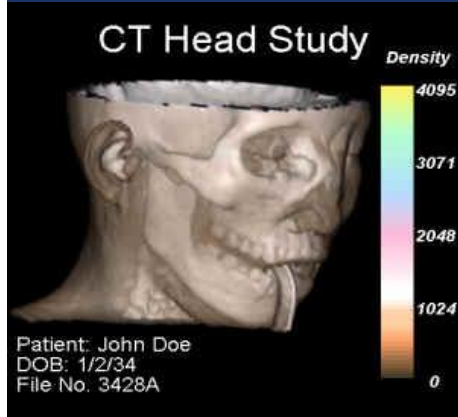
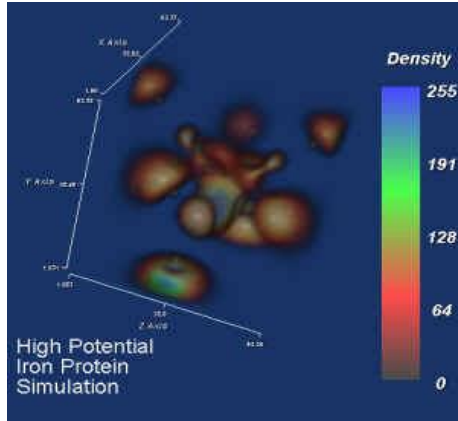


Phase II SBIR rejected

Multiple new Phase I
SBIR proposals rejected

Gave up on SBIRs

Some Progress on the Business Plan



Purchase

Requirements

Download

Feedback

VolView 1.2 is available in the following configurations:

VolView 1.2 License with 90-day technical support
(30-day for academic discount)

1 for \$1900	(\$1400 academic)
2 for \$3250	(\$2400 academic)
3 for \$4275	(\$3150 academic)

VolView 1.2 Upgrade from VolView 1.1 with 30-day technical support

1 for \$700	(\$500 academic)
2 for \$1200	(\$850 academic)
3 for \$1575	(\$1125 academic)

VolView 1.2 Research Partner Program (program requirements)

1 for \$700
2 for \$1200

VolView 1.2 Site License (15 licenses) with 1-year technical support
\$10,000

VolView 1.2 Source Code License (for internal development)
\$20,000

VolView 1.2 Source Code License (for commercial applications)
Please contact us

Success With Open Source

November 1999

Kitware signs three-year contract with US National Library of Medicine to develop open source segmentation & registration toolkit

The National Library of Medicine (NLM) at the National Institutes of Health (NIH), in collaboration with partner institutes and agencies NIDCR, NEI, NSF, NIDCD, and NCI (the "N" for nation in this case being the USA, see below for acronym definitions) has awarded a three year, multi-million dollar contract to six groups to develop an open source segmentation and

registration toolkit. The groups include GE Research, Kitware, UNC-CH, UPenn, U. of Tennessee, and MathSoft. (Subcontractors include Harvard Brigham & Women's Hospital, UPenn's GRASP Lab, Columbia University, and the Univ. of Pittsburgh).



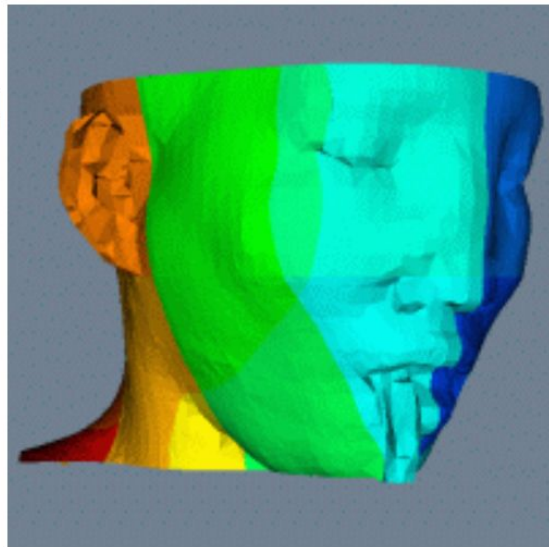
Success With Open Source

March 2000

Kitware signs three-year contract with three National Labs to develop parallel processing tools for VTK

Kitware was signed a three-year contract with the three National Labs - Los Alamos, Sandia, and Livermore - to develop parallel processing tools for VTK.

The goal of the project is to develop scalable parallel processing tools with an emphasis on distributed memory implementations. The project includes parallel algorithms, infrastructure, I/O, support, and display devices. In addition, some GUI components and end-user applications will be developed. The bulk of the technology developed in this contract will be embedded into the standard VTK open-source distribution.



Another Attempt at SBIRs

Web-based Techniques for Remote Scientific Visualization

Award Information

Agency: Department of Defense	Branch: Army	
Contract: DAAD17-02-C-0027	Agency Tracking Number: A012-0690	
Amount: \$119,994.00	Phase: Phase I	Program: SBIR
Solicitation Topic Code: N/A	Solicitation Number: N/A	

Timeline

Solicitation Year: N/A	Award Year: 2002	Award Start Date (Proposal Award Date): N/A	Award End Date (Contract End Date): N/A
----------------------------------	----------------------------	---	---

Small Business Information

KITWARE INC
469 Clifton Corporate Parkway
Clifton Park, NY 12065
United States

DUNS:
010926207

HUBZone Owned: No **Woman Owned:** No **Socially and Economically Disadvantaged:** No

Principal Investigator

Name: C. Charles Law
Title: Vice President
Phone: (518) 371-3971
Email: charles.law@kitware.com

Business Contact

Name: Ken Martin
Title: Vice President
Phone: (518) 371-3971
Email: ken.martin@kitware.com

Research Institution

N/A

Scalable Grid Technologies for Visualization Services

Award Information

Agency: Department of Energy	Branch: N/A	
Contract: DE-F002-03ER83692	Agency Tracking Number: 72388503-1	
Amount: \$100,000.00	Phase: Phase I	Program: SBIR
Solicitation Topic Code: N/A	Solicitation Number: N/A	

Timeline

Solicitation Year: N/A	Award Year: 2003	Award Start Date (Proposal Award Date): N/A	Award End Date (Contract End Date): N/A
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Small Business Information

KITWARE INC
469 Clifton Corporate Parkway
Clifton Park, NY 12065
United States

DUNS:
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Principal Investigator

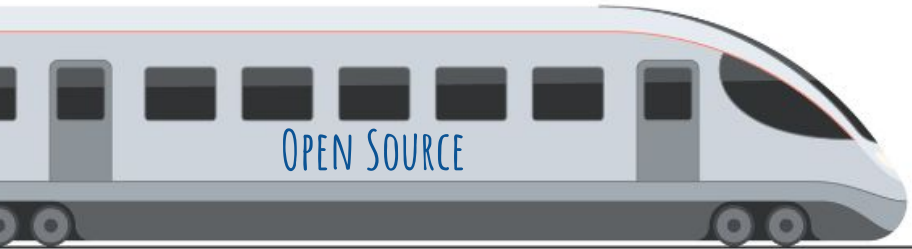
Name: William Schroeder
Phone: (518) 371-3971
Email: will.schroeder@kitware.com

Business Contact

Name: Kenneth Martin
Phone: (518) 371-3971
Email: ken.martin@kitware.com

Research Institution

N/A



The Question

Everyone Asks Us:

*If you give away your software for free,
how do you generate any revenue?*

Open Source Business Model

*We lose money on every sale,
but we make it up in volume!*

Open Source Business Model

Open source software provides:

- ◆ Marketing
- ◆ Lead generation
- ◆ Collaboration
- ◆ Credentials
- ◆ Recruiting leads
- ◆ Pre-employment training

Kitware Open Source Success Stories

ParaView Catalyst for In Situ Computing



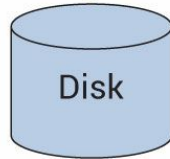
DoD SBIR to build open source capabilities

DOE SBIR to expand open source capabilities

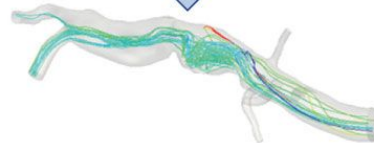
Important technology for the Exascale Computing Project

Demonstrated on Frontier supercomputer. Deployment in progress on Aurora.

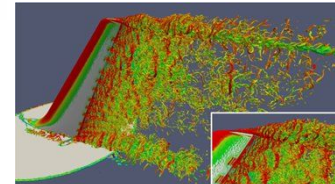
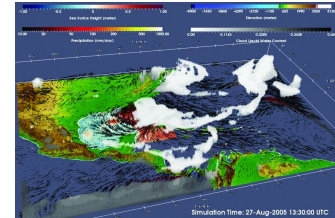
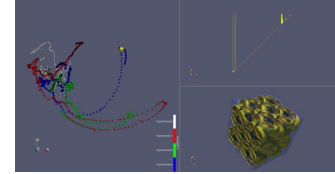
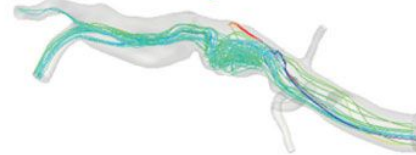
$$\rho \frac{D\vec{v}}{Dt} = -\nabla p + \mu \nabla^2 \vec{v}$$



 **ParaView**



$$\rho \frac{D\vec{v}}{Dt} = -\nabla p + \mu \nabla^2 \vec{v}$$

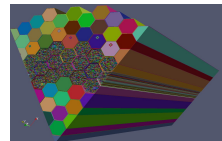
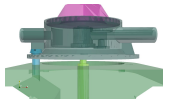
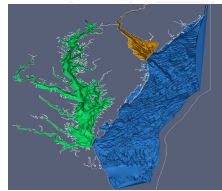
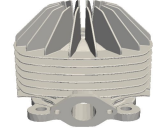
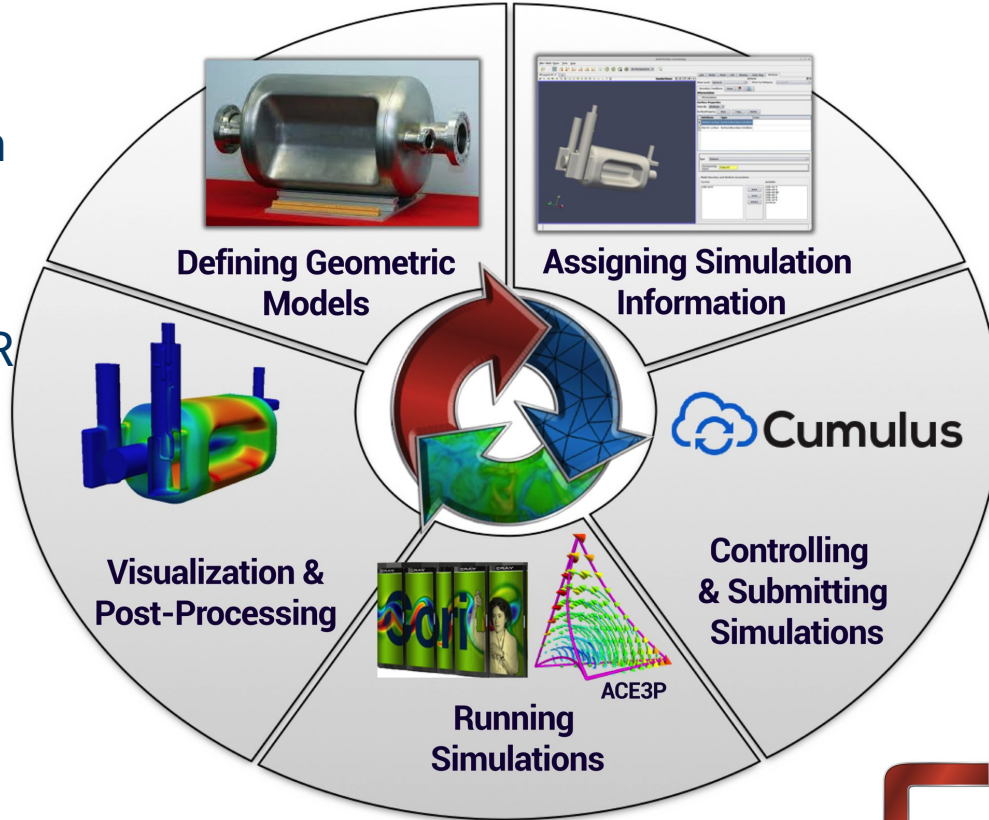


Computational Model Builder

Closed source project at the U.S. Army Engineer Research and Development Center (ERDC)

Received DOE and Army SBIR funding to improve and transition to open source

Now a powerful commercial business engine for Kitware that is compatible with proprietary simulation codes



Where Are We Now?

Kitware / Delivering Innovation, Advancing Knowledge

Software and AI R&D Services

Customers in government, industry, and academia
200+ active projects worldwide



Sustained Growth

100% employee-owned
\$53M revenue in 2023



200 Employees Worldwide

6 offices across USA/Europe
NY, NC, NM, VA, MN and France



Deep Expertise

Strong academic reputation
65% staff hold a graduate degree



25+ Years of Experience

Kitware USA, 1998
Kitware Europe, 2010



Founded on Open Source

Vibrant, enduring platform/communities
Strong commitment to Open Science



Customers & Collaborator / Fields of Application

Academics

75+ academic institutions worldwide

Government agencies

50+ government agencies and national laboratories

Commercial companies

Over 500 commercial customers

Health Care & Life Sciences

Image analysis, visualization, surgical planning, ultrasound systems, digital pathology, bioinformatics, ...

Energy & Manufacturing

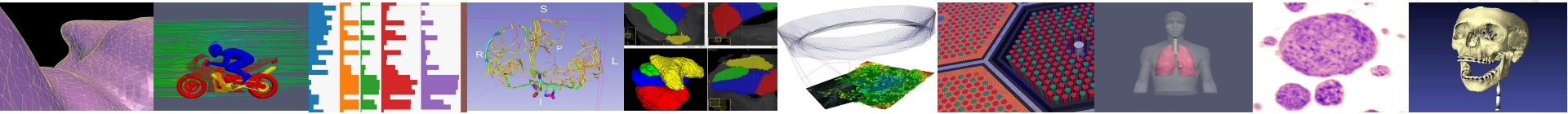
HPC, industrial computing, simulation workflows, visualization & analysis, I/O, ...

Defense & Intelligence

Ethical & explainable AI, deep learning, image & video forensics, threat detection, 3D reconstruction, cyber-physical systems, ...



Open Source Platforms / Open Science Focus

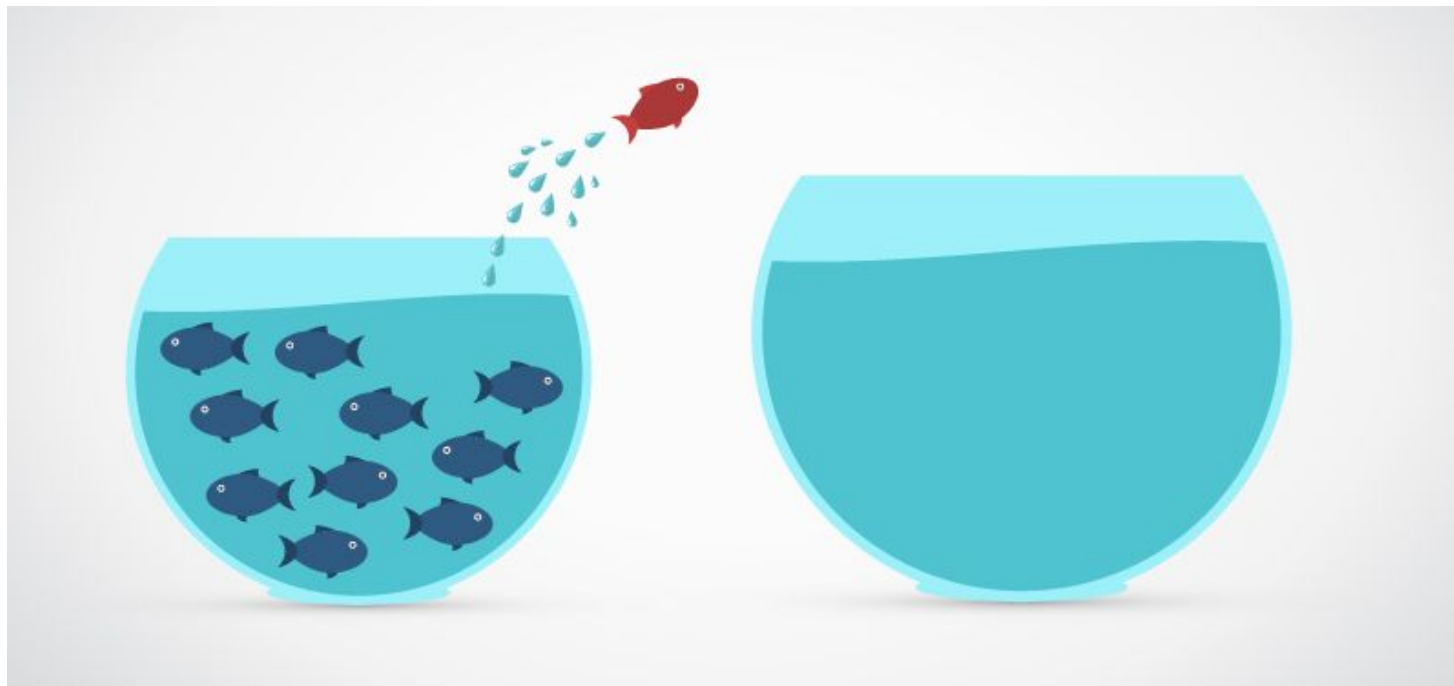


Things We Learned Along the Way

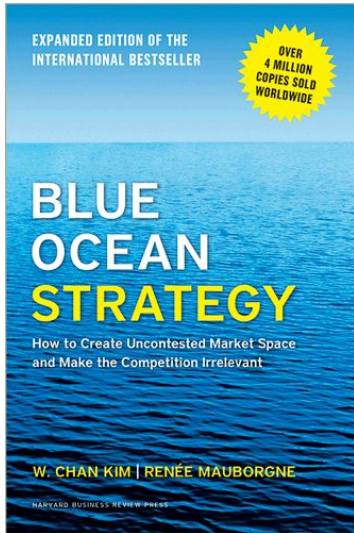
The Path to Success May Be Windy and Complex



You Don't Need To Be The Same As Everyone Else



Find Your Blue Ocean Strategy



Blue Ocean Strategy, Expanded Edition: How to Create Uncontested Market Space and Make the Competition Irrelevant

by W. Chan Kim and Renee A. Mauborgne

Any Questions?



Awardee Lessons Learned Panel

Lisa Avila | President & CEO, Kitware, Inc.

Isar Mostafanezhad | Founder & CEO, Nalu Scientific, LLC

Raghubir Gupta | Founder & CEO, Susteon Inc.

Sudarshan Gupta | COO, Susteon Inc.



U.S. DEPARTMENT OF
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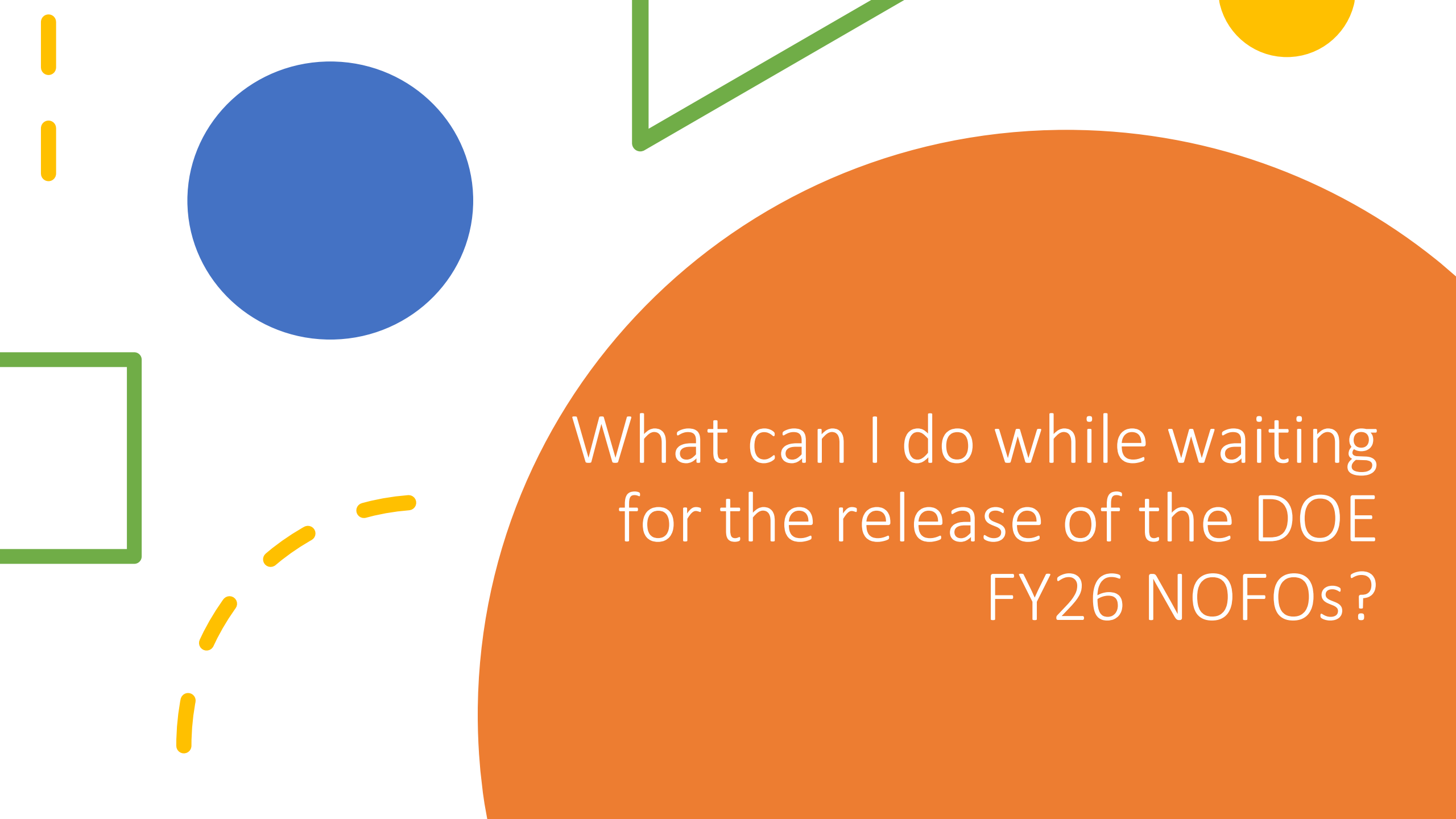
Office of SBIR/STTR
Programs

Awardee Advice

- Understand IP ownership and/or have agreement in place at the outset
- Importance of IP protection and protecting the branding/market presence you create
- Make IP strategy discussions the norm for your company...customer discovery, too!
- Use **TABA funds!** for IP due diligence and patents
- Begin preparing for Phase II before you even submit your Phase I application

REMINDER – Yes, the workshop was recorded and will be posted with the slides on [the event landing page](#) and [here](#).






What can I do while waiting
for the release of the DOE
FY26 NOFOs?

Participating DOE Program Offices – 2 Releases/year



 FY26 Release 1 – July 2025

 FY26 Release 2 – November 2025

Advanced Scientific Computing Research (ASCR)

Fusion Energy Sciences (FES)

Nuclear Nonproliferation (NNSA)

Cybersecurity, Energy Security & Emergency Response (CESER)

Basic Energy Sciences (BES)

High Energy Physics (HEP)

Energy Efficiency & Renewable Energy (EERE)

Electricity (OE)

Biological & Environmental Research (BER)

Nuclear Physics (NP)

Nuclear Energy (NE)

Environmental Management (EM)

Fossil Energy & Carbon Management (FECM)



U.S. DEPARTMENT OF ENERGY

Office of SBIR/STTR Programs

<https://science.osti.gov/sbir/Funding-Opportunities/FY-2026>

Are You SBIR/STTR Eligibility?

- Must be **for profit, U.S. owned/operated** (>51% U.S. citizen or permanent resident), and **<500 employees** (including affiliates)
- **Work must be done in the U.S.**
- **Focus is on performing R&D** – not purchasing equipment, commercializing a technology that has already been developed, or one that has very low risk and only needs capital
- PI **must be primarily employed** by SBIR/STTR firm **at time of award**; STTR **requires non-profit research institution** (RI) partner; PI can be employee of either small business or RI; award always goes to the SBC



Review DOE Application Criteria

Technical Merit

- Idea is novel
- Must be R&D!
- Responsiveness to the topic & subtopic

Ability to Carry Out the Project

- Solid work plan to prove feasibility
- Team composed of the right expertise

Impact

- Societal & Scientific Impact; commercial opportunity

Most meritorious applications awarded.



Are you a good fit with DOE SBIR/STTR?



- Review **topics** from previous releases
 - Search by keyword (Release 1 vs Release 2)
 - POCs provided; SBIR/STTR is a very small % of their overall R&D budgets
 - Check out references – roadmaps; other programs and funding opportunities might be mentioned
 - Review [market studies page](#)
 - Check out other awardees
- Check out other agencies – visit <https://legacy.www.sbir.gov/tutorials/individual-agency-requirements/>



Funding Opportunities

Fiscal Year		
FY25 (Future)	FY24 (Current)	FY23 (Closed)

2024

Phase I	Release 1	Release 2
Topics Issued	Monday, July 10, 2023	Monday, November 6, 2023
Document	Phase I Release 1 Topics	Phase I Release 2 Topics
Phase 0 Application Assistance (free for first time applicants) starts	Monday, July 10, 2023	Monday, November 6, 2023

Questions – Contact: Naomi O’Neil, naomi.oneil@netl.doe.gov

References: Subtopic a:

1. Güler, O., Bağcı, N., 2020, A Short Review on Mechanical Properties of Graphene Reinforced Metal Matrix Composites, *Journal of Materials Research and Technology*, January 2020, <https://www.sciencedirect.com/science/article/pii/S2238785419312852> (November 8, 2021)
2. Hidalgo-Manrique, P., Lei, X., Xu, R., et al., 2019, Copper/graphene Composites: A Review, *Journal of Material Science*, 54:12236-12289, <https://link.springer.com/article/10.1007/s10853-019-03703-5> (November 8, 2021)
3. Shin, S.E., Choi, H.J., Hwang, J.Y., et al., 2015, Strengthening Behavior of Carbon/metal Nanocomposites, *Scientific Reports*, 5:16114, <https://www.nature.com/articles/srep16114> (November 8, 2021)



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Programs

<https://science.osti.gov/sbir/Funding-Opportunities>
<https://science.osti.gov/sbir/Awards>

DOE Program Office Websites



Review the following:

- Mission
- Funding Priorities and Announcements (non-SBIR)
- Technical Reference Data and Reports
- Workshop & Conference Proceedings
- Contact Information

Office of ENERGY EFFICIENCY & RENEWABLE ENERGY ABOUT EERE RESOURCES BUILDINGS & INDUSTRY RENEWABLE ENERGY SUSTAINABLE TRANSPORTATION

BUILDINGS

Building Technologies Office

About the Building Technologies Office Funding Opportunities Events, Webinars, and Conferences

The Building Technologies Office (BTO) conducts research, development, and demonstration activities to accelerate the adoption of cost-effective technologies, techniques, tools, and services that enable high-performing, cost-efficient, reliable, comfortable, and healthy buildings for all Americans that also support the energy system and the electric grid.

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Office of SBIR/STTR Programs

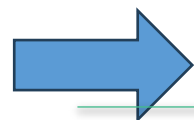
Office of

We want you to succeed!



Email us! sbir-sttr@science.doe.gov

Get Connected!



Subscribe to our mailing list: <https://science.osti.gov/sbir>

Recorded Topic and NOFO Webinars

<https://science.osti.gov/sbir/Funding-Opportunities>



Application Process “Ask Us Anything” Webinars

Being on our mailing list is the most important way to stay up to date on our funding opportunities!



U.S. DEPARTMENT OF
ENERGY

Office of SBIR/STTR
Programs

Questions??



Carol Rabke, Ph.D.

Tech to Market (T2M) Advisor - Partnering

carol.rabke@science.doe.gov

585.576.7981

Dave McCarthy

Tech to Market (T2M) Advisor – Commercialization Programming

dave.mccarthy@science.doe.gov

Eileen Chant, Ph.D.

Acting Director & Outreach Program Manager

eileen.chant@science.doe.gov



<https://www.sbirpartnering.org/doe>



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<https://science.osti.gov/sbir>