

# WANTED



# INVENTORS

## Scientist and Engineer

Do you have inventions or ideas with potential military or commercial applications?  
Learn how to protect your property.

*Attend the*

**Intellectual Property and Technology Transfer Class**

# REWARD

- Inventor receives \$200 upon filing Patent Application.
- Inventor receives first \$2K each year if Patent Application or Patent is licensed.
- Inventors split 20% of all royalties received each calendar year.
- Inventor receives maximum \$150K each year.

Call 301-342-5586 or 301-342-9559 for additional information or register at <https://ess.navair1.navy.mil>



# Introduction to Intellectual Property and Technology Transfer (IP/T2)



## Intellectual Property

- Intellectual property is an intangible property or proprietary asset which applies to any product of the human intellect whether or not the subject matter is protectable under the laws governing the different forms of intellectual property. The major forms of protection for intellectual property are patent, copyright, trademark, and trade secret.



## Technology Transfer

- *“Technology transfer is the process by which existing knowledge, facilities, or capabilities developed under federal research and development (R&D) funding are utilized to fulfill public and private needs.”*

# Tactical to Practical



# Microwave Oven



## What company filed the first patent for a microwave oven that cooked food?

- DuPont
- IBM
- General Electric
- Raytheon



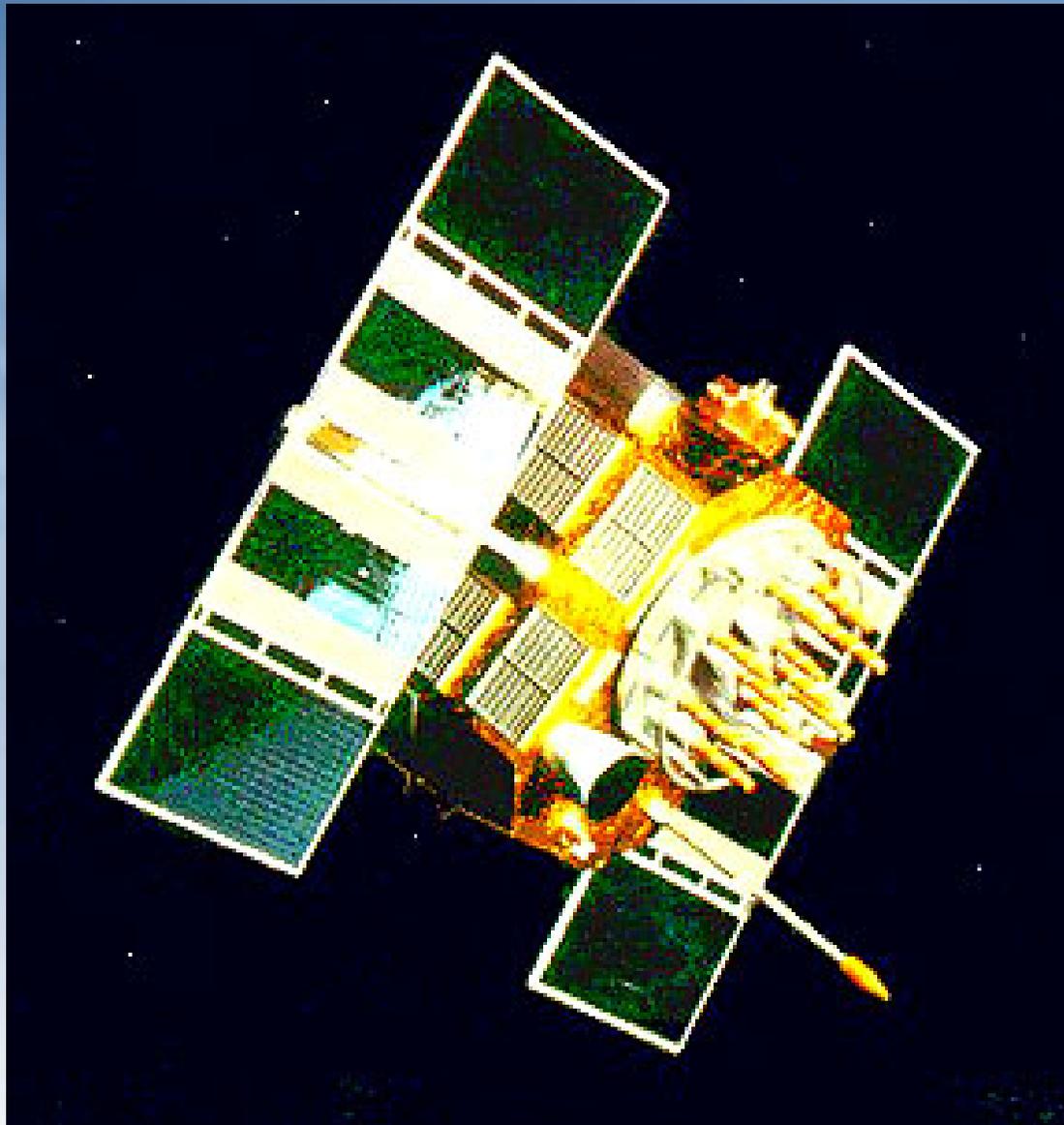
**What company filed the first patent for a microwave that cooked food?**

- Raytheon





# Global Positioning System (GPS)



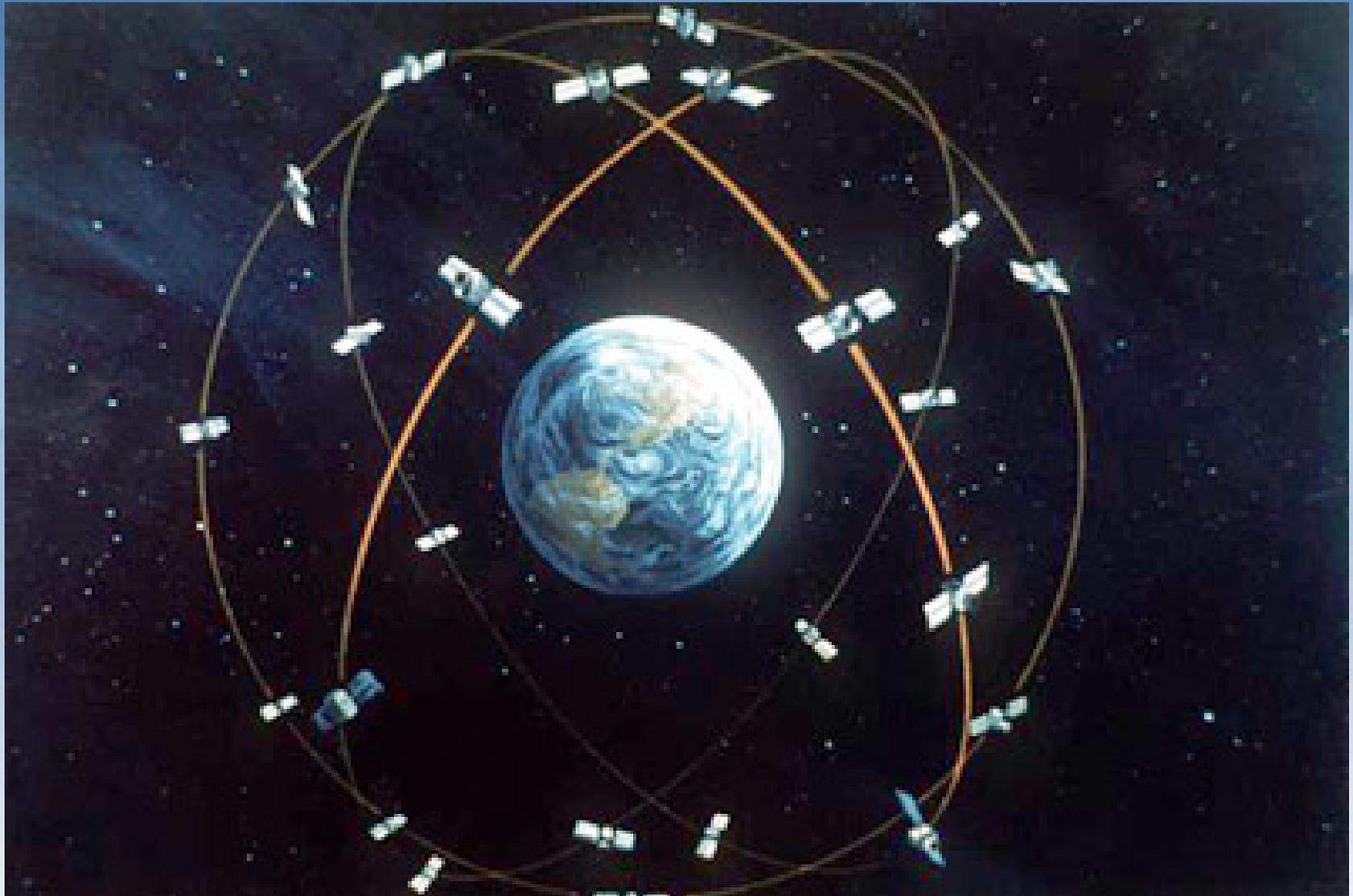
## When was the first GPS satellite launched?

- 1966
- 1978
- 1981
- 1983

# When was the first GPS satellite launched?

- 1978





# How many GPS satellites are currently in operation?

- 16
- 8
- 24
- 32

# How many GPS satellites are currently in operation?

- 24







M1097A2HMMWV Special Forces Carrier with supplemental armor (44 grain), brushguard, and winch. Curb weight 7,258 lbs, payload 3,042 lbs, maximum towed load 4,200 lbs. Minimum cruising range 275 miles Troop seating capacity 1+3. [Photo courtesy AM General Corp.]



## What is the maximum wall-height that a Hummer can scale?

- 15 inches
- 22 inches
- 31 inches
- 38 inches



# What is the maximum wall-height that a Hummer can scale?

- 22 inches

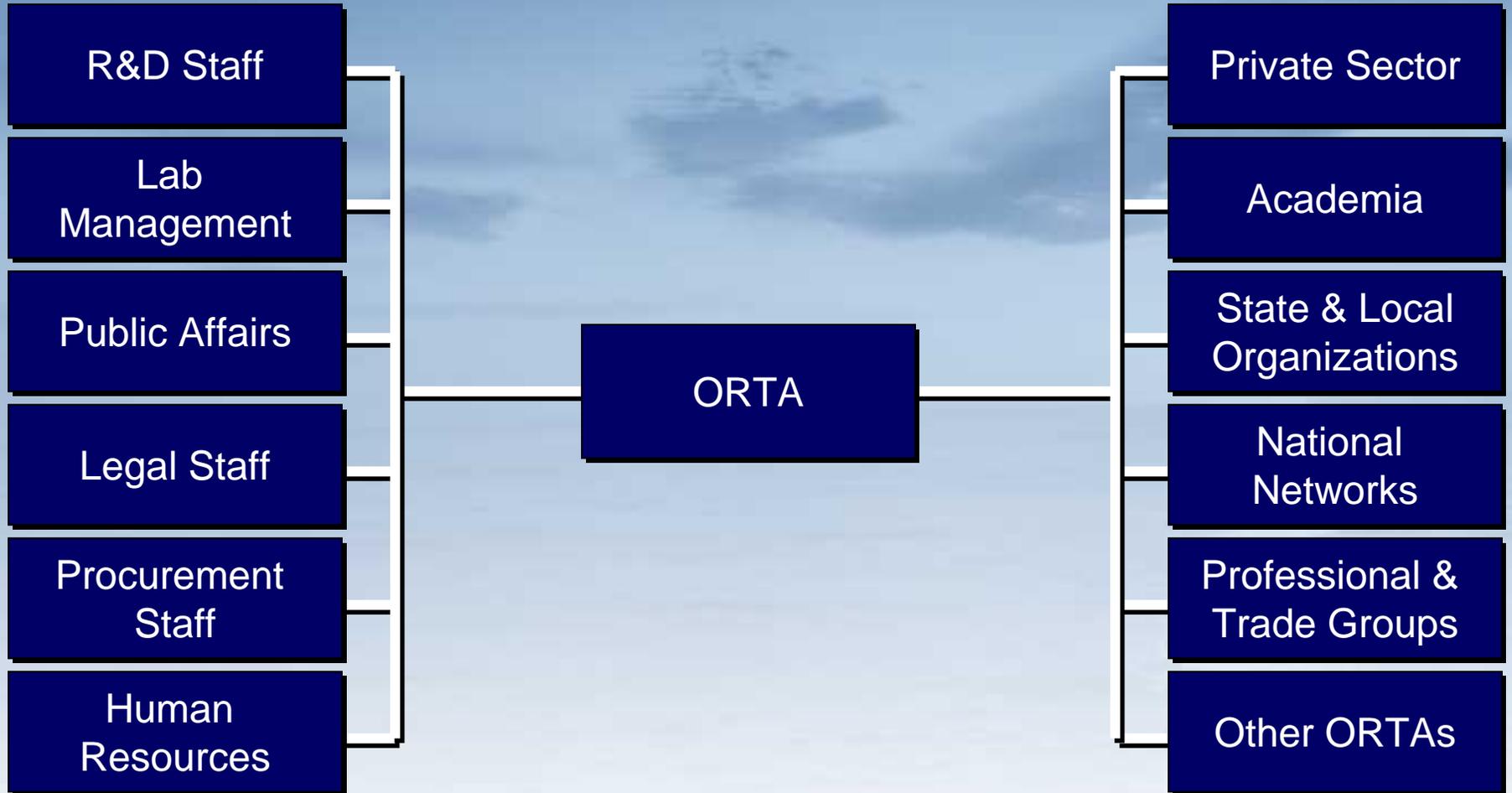




# Office of Research and Technology Applications (ORTA)



**Technology Transfer Organization**  
*ORTA – Focal Point For Technology Transfer*



***Inside The Lab***

***Outside The Lab***



## What is it?

- *“Technology transfer is the process by which existing knowledge, facilities, or capabilities developed under federal research and development (R&D) funding are utilized to fulfill public and private needs.”*

# Intellectual Property



## Intellectual Property

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## Subject Data

- Subject Data is data first recorded in the performance of the Cooperative Work, which means research, development, engineering, or other tasks performed under this Agreement. Subject data is either in the form of written information, electronically recorded information, films, or the like, which were done or created as part of the Cooperative work. It does not include any of the pre-existing data of either collaborator that existed before entering in the Agreement
- The Statement of Work (SOW) is very important in defining specifically what work is within the scope of the Agreement and, therefore, defines the limits of Subject Data.



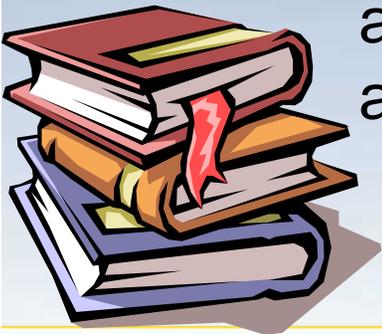
## Non-Subject Data

- Non-Subject Data is all other data resulted from work by either collaborator even if the other work was going on at the same time.



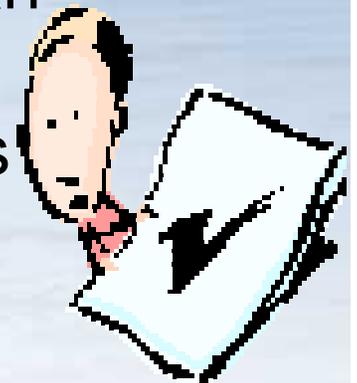
# Copyright

- Legal protection provided for products of the mind that are produced in tangible expressions and contain some original expression.
  - To provide individuals and companies with legal protection for a wide variety of works of “authorship”
  - Examples: literary, musical, dramatic, pantomimes, choreographic, pictorial, graphic, and sculptural, audiovisual, sound recording, computer databases and software



# Trademark

- A trademark is a word, name, symbol or device which is used in trade with goods to indicate the source of the goods and to distinguish them from the goods of others. A servicemark is the same as a trademark except that it identifies and distinguishes the source of a service rather than a product. The terms “trademark” and “mark” are commonly used to refer to both trademarks and servicemarks.



## Trade Secrets

- Any formula, pattern, device, or compilation of information that is used in a business and that gives the business an opportunity to obtain an advantage over competitors who do not know or use it.



# What are the Guiding Principles?



## Legislative Review

- What was the first law to define technology transfer as a mission of the federal government?
  - Stevenson-Wydler Technology Innovation Act of 1980.



- Who is responsible for technology transfer?
  - According to the Federal Technology Transfer Act of 1986 (FTTA), all federal laboratory scientists and engineers are responsible for technology transfer.



## Legislative Review

- Who can government agencies partner with for technology transfer?
  - Private Industry, other federal laboratories, units of state or local government, non-profit organizations, academic institutes.



## Legislative Review

- What technology can be transferred?
  - Per Federal Technology Transfer Act of 1986 the following items are included in technology transfer: exchange of personnel, services, equipment. A laboratory may accept, retain, and use funds, personnel, services and property from a collaborating party and provide personnel, services, and property to a collaborating party.



## Legislative Review

- What act authorized Cooperative Research and Development Agreements (CRADAs) to be utilized for technology transfer?
  - The Federal Technology Transfer Act 1986.



## Legislative Review

- What act had a major impact on work with universities, not-for-profit organizations and small business?
  - The Bayh-Dole Act of 1980 – This act provided exclusive rights to inventions arising under funding agreements with federal agencies to small businesses and nonprofit organizations agreeing that products embodying the invention will be manufactured substantially in the U.S.



## Who benefits from Technology Transfer?

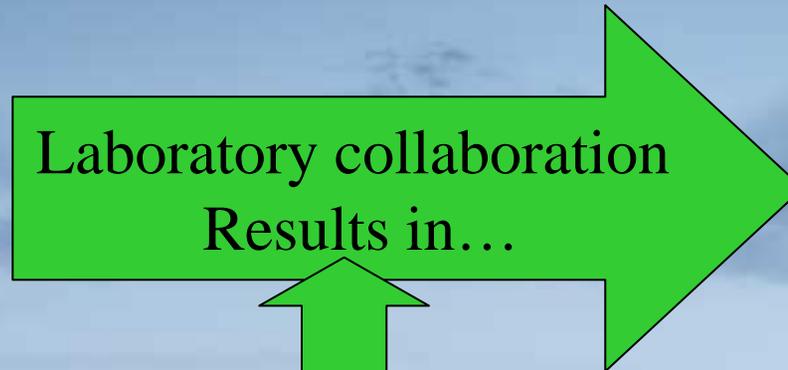
- Government
- Industry
- Academia
- Government scientist or engineers

# How is Technology Transferred?





Laboratory  
Researcher(s)  
+  
Idea



Collaborators  
may provide...

equipment

facilities

Funds

collaboration

personnel

(only non-Navy collaborator  
can provide funds)



# Cooperative Research and Development Agreement (CRADA)



# Commercial Service Agreements



10 U. S. C. 2539b



10 U. S. C. 2563



10 U. S. C. 2681



# Educational Partnership Agreements



Memorandum of Agreement  
(MOA)

Memorandum of Understanding  
(MOU)



# Patent License



## Patents

- An agreement between the government and an inventor whereby, in exchange for the inventor's complete disclosure of the invention, the government gives the inventor the right to exclude others from making, using, or selling the invention for a period of 20 years.



## Patents (continued)

- Patents are:
  - Granted by the government to provide individuals with legal protection for their discoveries (inventions)
  - Article 1, Section 8, of the U.S. Constitution states that Congress is empowered to “...promote the progress of science and useful arts by securing for limited times to authors and inventors the exclusive rights of their respective writings and discoveries”.
  - Covered by Federal Law (Title 35 of U.S. Code)



## Patents (continued)

- Patents are:
  - An invention or discovery qualifies for a patent when it meets certain statutory requirements. There are three statutory requirements described in 35 USC. They are: novelty, usefulness, and non-obviousness. To be patentable, an invention must also belong to one of the following broad categories: a process, a machine, a manufacture, a composition of matter, or any new and useful improvement thereof.



## Types of Patents

- Utility
  - Process, machine article of manufacturer, composition of matter, improvements on all the above
- Plant
  - Covers asexually reproducible plants such as flowers.
- Design
  - Covers the unique shape or ornamental appearance of an object.



# License

- Exclusive
- Partially-Exclusive
- Non-Exclusive



## License Administration

- ORTA
- TechLink, Montana State University
- First Responders, University of Pittsburgh
- Tim Wittig, SAIC
- DOD Tech Match
- TEDCO
- DBED



Liquid Atomizing Nozzle  
U. S. Patent Number 5,520,331

NAV  AIR



Steven Adams/Tribune-Review



# Allegheny County Fire Academy Test Diesel Fuel Pan Fire



Steven Adams/Tribune-Review



# Allegheny County Fire Academy Test Diesel Fuel Pan Fire



Steven Adams/Tribune-Review



# Allegheny County Fire Academy Test Diesel Fuel Pan Fire Joe Wolfe In Action



Steven Adams/Tribune-Review



# Allegheny County Fire Academy Test Diesel Fuel Pan Fire Good Job Joe



Steven Adams/Tribune-Review



# Allegheny County Fire Academy Test Diesel Fuel Pan Fire Tim Wittig In Action



Steven Adams/Tribune-Review



# Allegheny County Fire Academy Test Wood Crib Fire



Steven Adams/Tribune-Review



# Vent Hood Application



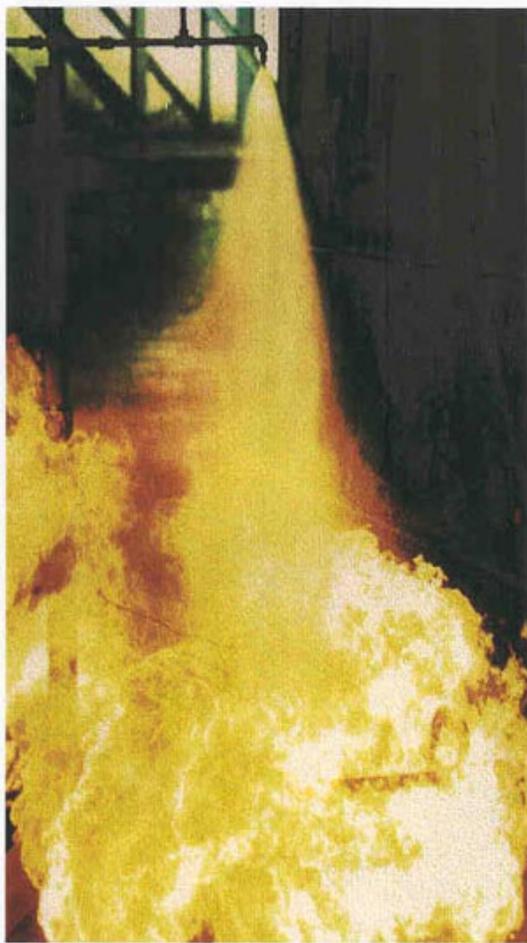
# Prototype Nozzle



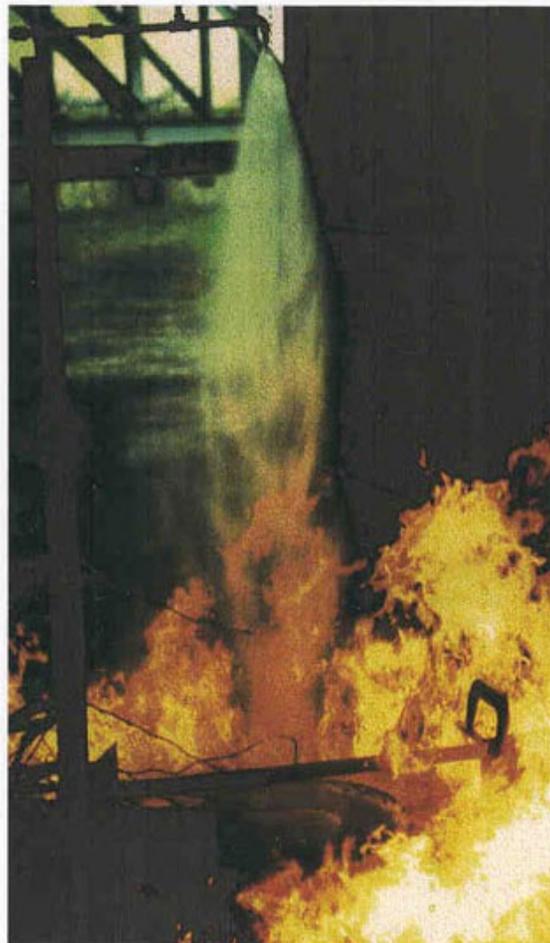


# Commercial Hydraulic Nozzle

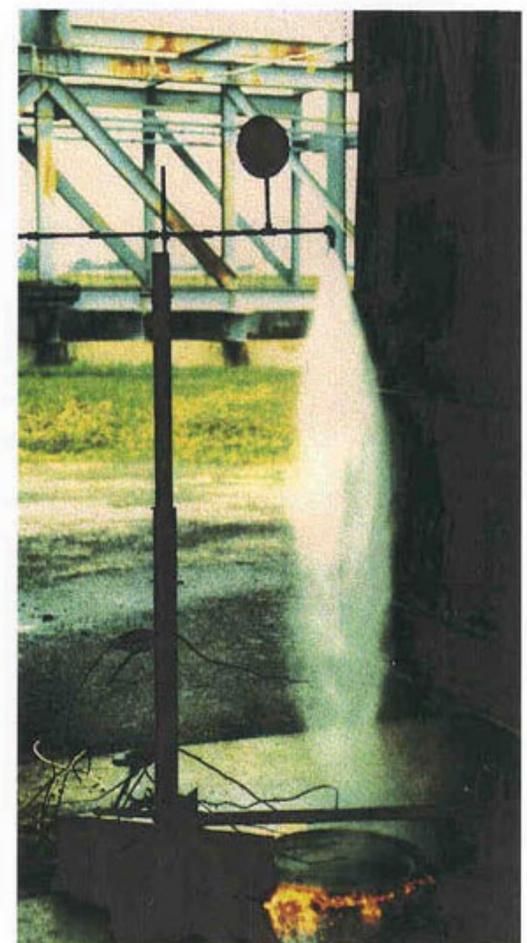
t = .3 sec



t = 1 sec



t = 2 sec



# Commercial Air-Atomizing Nozzle

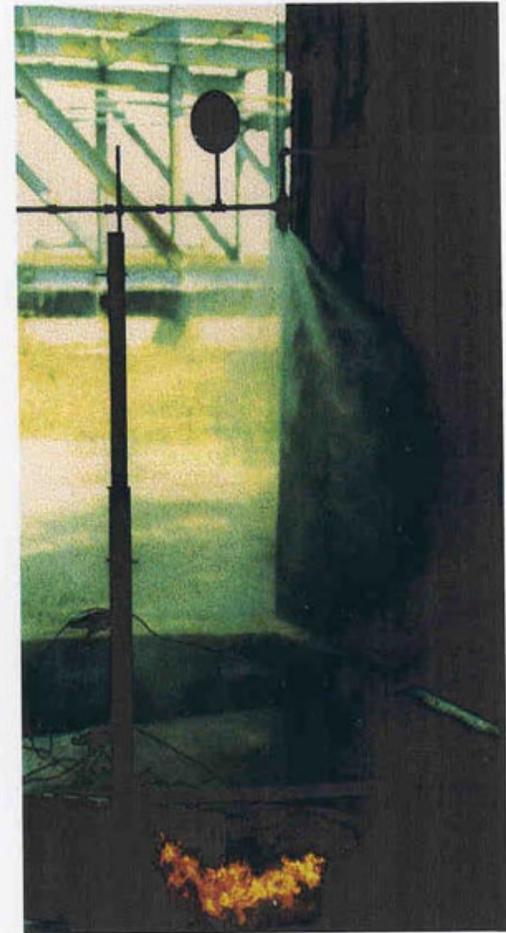
$t = .3 \text{ sec}$



$t = 1 \text{ sec}$



$t = 2 \text{ sec}$

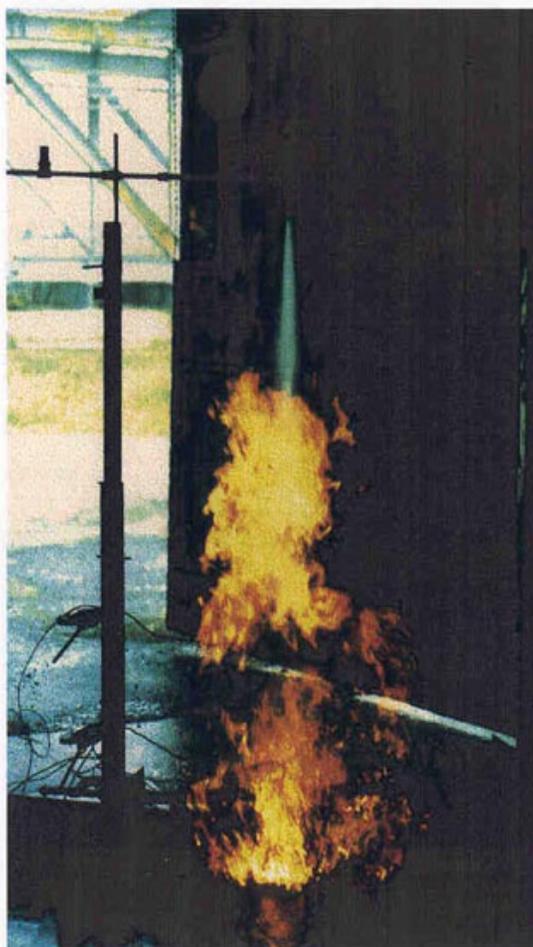


# NAVAIR Developed Nozzle

t = .3 sec



t = 1 sec



t = 2 sec





## Summary



**Questions?**



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