

# INNOVATIONS

SRI innovations touch our lives every day. They have created new industries, billions of dollars in market value, and lasting benefits to society.



2000

### Trace Species Detection

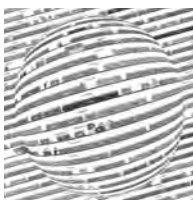
Developed technology to detect hazardous chemicals, explosives, and narcotics at parts-per-trillion levels



2002

### Charter Schools

Conducted first national evaluation of the growing charter school movement in the United States



2003-present

### Genome/Pathway Databases

Creation of BioCyc™ database and Pathway Tools software to help biologists visualize biochemical pathways and metabolic maps



2003-present

### Combat Training

Integration of live, virtual, and constructive training systems for the U.S. National Guard



2004

### Coordinated Robots

Designed the Centibots—the earliest and largest team of coordinated, mobile robots that can map unknown environments



2004-present

### Intelligent Computing

Designing intelligent computer systems for the U.S. DARPA Personalized Assistant that Learns (PAL) program



2005-present

### Incoherent Scatter Radar

Created the Advanced Modular Incoherent Scatter Radar (AMISR) to study space weather, which can affect satellite and electronic communications



2006-present

### Speech-to-Speech Translation

Deploying technology for mobile devices that enables soldiers and others to communicate in local languages in real time

# 50

SRI was dubbed “Spin-off City”—an innovation engine that creates new businesses to capitalize on SRI technology developments and move them into the marketplace.



**1991**

**Ammonium Dinitramide**  
Patented an environmentally safe compound for use in rocket propellant and airbag deployment



**1990s**

**Smart Materials**  
Invented “artificial muscle”, a new class of electroactive polymers



**1996–present**

**Speech Recognition**  
Developed and licensed a natural language platform technology to automate delivery of customer support



**1996–present**

**Network Intrusion Detection**  
Invented EMERALD™, a software-based intrusion detection technology that uses lightweight sensors for real-time cyberattack detection



**1997**

**Postal System Automation**  
Designed advanced address recognition system deployed by the U.S. Postal Service



**1998–present**

**Assisted Hydrothermal Oxidation**  
Patented this environmentally safe, cost-effective method to dispose of hazardous materials and explosives



**1990s–present**

**Ground- and Foliage-penetrating Radar**  
Pioneered technology to find buried or hidden unexploded ordnance and other items of interest



**1990s**

**Robotic Surgery**  
Developed minimally invasive robotic surgical system used by surgeons around the world to help patients recover quickly and with less pain. Spun off Intuitive Surgical, Inc.



**1990s–present**

**Cancer Drugs**  
Discovered new class of cancer-fighting drugs proven to be highly effective in experimental models. One discovery, targretin, is in clinical use against a type of lymphoma.

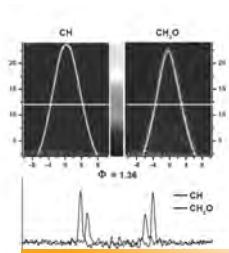


**1990s–present**

**Bio-agent Detection**  
Developed portable technology for biological warfare detection, disease and drug abuse diagnostics, and environmental monitoring

# 1980s

Silicon Valley emerged as the technology capital of the world. SRI expanded significantly in 1987 when the David Sarnoff Research Center was given to SRI by General Electric.



1980s

### Two-dimensional Laser Fluorescence Imaging

Designed technology used worldwide to visualize flow and chemical processes in combustion



1980s

### Television

Emmy® Award-winning Sarnoff Corporation, SRI's subsidiary, developed high-definition television (HDTV) for commercial use



1980s

### FM Spectroscopy

Developed ultrasensitive trace gas detection technology for explosives detection, medical diagnostics, industrial process control, and pollution monitoring



1980s

### Ultrasound

Made ultrasound practical as a medical diagnostic tool



1980s

### Consumer Psychology

Designed the Values and Lifestyles™ (VALS) market research tool, used by advertisers to determine motivation for consumer purchasing decisions



1980s

### Multimedia Electronic Mail

Implemented one of the first electronic mail systems that included graphics, speech, and text



1980s

### Stealth Technologies

Developed an active radar cross-section reduction method to help U.S. military planes avoid enemy radar detection



1980s-present

### Failure Analysis

Developed FRASTA (FRActure Surface Topography Analysis), a tool for re-creating cracks in structures for failure analysis

# HO

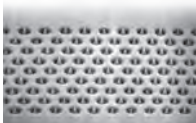
Stanford Research Institute became independent from Stanford University in 1970, and in 1977 changed its name to SRI International.



**1976-1977**

### Packet-switching and Internet

Sent first mobile internetworked transmissions between two, and later three, disparate networks



**1970s**

### Spindt Cold Cathode

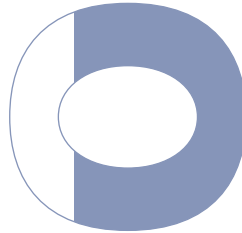
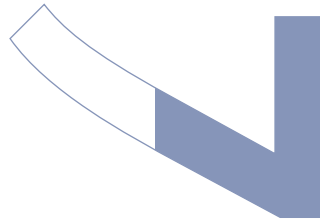
Developed high current-density cathode ray tubes; led to today's "instant-on" displays for computers and televisions



**1978**

### Deafnet

Developed the first telecommunications system that allowed the hearing impaired to use email and computer communications



**1970-1992**

### Network Information Center (NIC)

Served as the first domain name registration clearinghouse and support center for all hosts connecting to the ARPANET and Internet



**1978-present**

### Education

Conducted first longitudinal studies of youth with disabilities to improve the U.S. education system



**1970s-present**

### Over-the-Horizon Radar

Pioneered technology for the military that detects objects thousands of miles beyond the horizon or conventional lines of sight



**1979**

### China's Industrial Development

Engaged with political, business, and academic leaders to build relationships with foreign businesses



**1970s**

### Cash Management Account

Created concept of a convenient single account that includes stocks, bonds, money market funds, checking, and credit/debit card services

# 50

SRI expanded from its West Coast base to build its reputation as an international R&D powerhouse.



1962

### Computerized Airline Reservations

Developed a real-time reservation and check-in system, adopted by Scandinavian Airlines, IBM, and others



1968

### Interactive Computing

Invented mouse in 1964 and in 1968 first demonstrated the concepts of windows, videoconferencing, hypertext, and more



1960s

### Optical Read-Write Storage

Pioneered technology that led to widespread commercial development of optical disk systems



1960s

### Pacific Rim Industrial Development

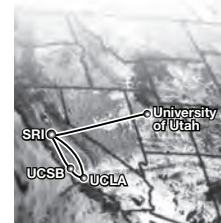
Co-created the Japan-Western Americas Association and the Pacific Basin Economic Council; collaborated in design of Japan's Nomura Research Institute



1966

### Robotics

Created Shakey, the world's first intelligent mobile robot



1969

### Networking

Enabled first logon on the ARPANET, the Internet's precursor



1960s

### LIDAR

Pioneered laser radars, which provide accurate data for weather and pollution monitoring



1960s-present

### National Defense

Deployed radar and stealth technologies in the Cold War, GPS in the Gulf War, and intelligence systems for today's war against terrorism

These are a few of SRI's many innovations. For more, visit [www.sri.com/about/timeline](http://www.sri.com/about/timeline)



1955

**Theme Parks**

Identified Anaheim, California, as the site for Disneyland



1955

**Banking**

Revolutionized the industry with automatic check processing and magnetic ink character recognition (MICR)



1954

**Railway Transport**

Designed the Hydra Cushion, an industry-standard, shock-absorbing coupler technology for Southern Pacific Railroad



1959

**Movies**

Won an Academy Award for co-developing the Technicolor® electronic printing timer, which speeded creation of color-corrected movie prints



1950s

**All-Magnetic Logic**

Developed world's first all-magnetic computer, producing essentially error-free computing. Used in New York City's subway system



1949

**Air Pollution Symposium**

Hosted first national symposium on air pollution, bringing together 400 researchers and scientists



1950s

**Electrostatic Discharge Rods**

Developed industry-standard devices to safely discharge static electricity from aircraft, spacecraft, and tankers



1957-1997

**Worldwide CEO Summits**

Sponsored the International Industrial Conference, a quadrennial summit of world and business leaders from 50 countries



1950s-today

**Economic Development**

Providing consulting to more than 100 countries, including counsel for the creation of India's National Council for Applied Economic Research in 1955



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