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USPTO Announces 2013 National Inventors Hall of Fame Inductees

Includes inventors of plasma displays, modern synthesizers, cellular technology

Washington – The U.S. Department of Commerce’s United States Patent and Trademark Office (USPTO) and the National Inventors Hall of Fame today announced the inductees for 2013. This year’s class includes inventors behind patented innovations such as the electronic synthesizer, flat panel plasma displays, iris recognition technology, and the code providing the foundation for 3G cellular systems. This year’s induction ceremony will take place on May 1, 2013 at the USPTO’s headquarters in Alexandria, Virginia. The USPTO founded the National Inventors Hall of Fame in 1973 and has been a long-standing partner since the organization’s incorporation as a separate, non-profit educational foundation.

The National Inventors Hall of Fame annually accepts nominations for men and women whose work has changed society and improved the quality of life. The candidate’s invention must be covered by a U.S. patent, and the work must have had a major impact on society, the public welfare, and the progress of science and the useful arts.

“We are honored to recognize these individuals who conceived, patented, and advanced so many of the great technological achievements that have changed our world,” said Acting Under Secretary of Commerce for Intellectual Property and Acting Director of the USPTO Teresa Stanek Rea.

“On behalf of the White House, I add my congratulations to this year’s inductees,” said John P. Holdren, President Obama’s science and technology advisor and Director of the White House Office of Science and Technology Policy. “Your creativity, perseverance, and entrepreneurialism exemplify the American ‘can-do’ spirit.”

“We look forward to the upcoming induction ceremony, as this year’s class of inductees demonstrates the importance of innovation,” said Frederick Allen, Chairman of the Board of Directors of the National Inventors Hall of Fame. “The applications and widespread use of their inventions show us how vital ingenuity is to not just the well-being of the United States, but also the rest of the world.”

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The National Inventors Hall of Fame 2013 Inductees are:

Arthur Ashkin

Optical Trapping – At Bell Labs, Ashkin invented optical trapping, also called optical tweezing, a process that traps molecules and macroscopic particles by using laser light. The technique utilizes radiation pressure, when light or other forms of radiation exert force on an object. The process has allowed for the study of small particles in many fields.

Donald Bitzer, Robert Willson, Gene Slottow (1921-1989)

Plasma Display – In the mid-1960s, Don Bitzer and Gene Slottow, faculty at the University of Illinois at Urbana-Champaign, and graduate student Robert Willson, worked together to create the first plasma display. A new display was needed for the PLATO computerized learning system that had been created by Bitzer because traditional displays had no inherent memory, lacked high brightness and contrast, and flickered.

Garrett Brown

Steadicam[®] camera stabilizer – Brown invented the Steadicam camera stabilizer, ushering in new technology that enhanced movie and television production by allowing directors to obtain shots that were previously thought impossible. His invention is a body-mounted stabilization device so camera operators can move freely while filming remains smooth. Among other inventions, Brown also created the Skycam system that changed how sporting events are filmed by allowing moving aerial views.

John Daugman, Leonard Flom, Aran Safir (1926-2007)

Iris Recognition – Flom and Safir patented their idea for an iris identification system in 1987, basing their work on the fact that every iris, including in identical twins, is unique. Daugman then went on to invent the iris recognition biometric algorithms used in the identification of people using the iris. Today, iris recognition is considered the most accurate in the field of biometric identification based on physical or behavioral characteristics.

Irwin Jacobs, Andrew Viterbi

CDMA Technology – Jacobs and Viterbi, two of Qualcomm's co-founders, were major contributors to code division multiple access (CDMA) technology that is used in cellular telephone networks. CDMA now supports over 1.6 billion subscribers in developing and developed countries with voice and high speed Internet access. It was standardized for North America in 1993.

Joseph Lechleider

Digital Subscriber Line (DSL) – While working at Bellcore, Lechleider was the first person who demonstrated the feasibility of sending broadband signals over copper. His work turned the existing copper wire phone network into a high-speed broadband delivery instrument, allowing

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for transmission of data at equal rates in both directions. He also suggested that larger amounts of data could be sent in one direction and smaller amounts in the other, which came to be called asymmetric DSL, or ADSL, the standard used today in much of the world's DSL connections.

Samuel Alderson (1914-2005)

Crash Test Dummy – Alderson was a pioneer in developing the crash-test dummy, a full-scale anthropomorphic test device. The crash-test dummy has provided automotive engineers with valuable information, enabling them to design more effective safety features including seat belts and air bags. From its beginnings of use in the automotive industry, dummies have gone on to provide valuable data in all kinds of development and testing, from aircraft to medical technology.

John Birden (1918-2011), Ken Jordan (1929-2008)

Radioisotope Thermoelectric Generator (RTG) – Birden and Jordan were working at Monsanto's Mound Laboratory when they developed the RTG, a self-contained power source that obtains its power from radioactive decay. RTGs have powered most of the exploration vehicles the United States has launched into deep space, where the sun's intensity is not sufficient to generate electricity with solar cells and steady, reliable power is needed in unmanned situations.

Alfred Loomis (1887-1975)

Long Range Navigation System (LORAN) – Among Loomis's many innovations, his LORAN radio navigation system for marine and flight navigators is probably the best known. LORAN used fixed land beacons that allowed navigators to determine a vessel's location, and it remained an essential tool until the introduction of the Global Positioning System in the 1990s.

Robert Moog (1934-2005)

Moog Synthesizer – In 1964, Moog introduced the first complete voltage controlled modular synthesizer, an instrument capable of producing a wide variety of electronic sounds. His synthesizer helped revolutionize the face of music, giving artists and composers the capability to create a brand new palette of sounds.

Grote Reber (1911-2002)

Radio telescope – Reber, a pioneering radio astronomer, built the first substantial radio telescope dedicated to astronomy. Radio astronomy allows for the detection of objects and phenomena not possible with optical astronomy, utilizing a radio receiver that can amplify faint cosmic signals, making the waves strong enough to be recorded and charted.

The National Inventors Hall of Fame is the premier non-profit organization in America dedicated to honoring legendary inventors whose innovations and entrepreneurial endeavors have changed the world. Founded in 1973 by the United States Patent and Trademark Office and the National Council of Intellectual Property Law Association, the Hall of Fame will have 487 inductees with

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its 2013 induction. The National Inventors Hall of Fame and Museum is located in the atrium of the Madison Building on the campus of the USPTO, at 600 Dulany Street, Alexandria, VA. For more information on the National Inventors Hall of Fame, including inductee nomination forms and a full listing of inductees, please visit www.invent.org.

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