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Remembering Bob Pease

Legendary Analog Expert

Texas Instruments honors the accomplishments of the company's legendary design engineer, Bob Pease, who died on June 18, 2011. During his 33-year career at National Semiconductor, Bob received 21 patents and designed more than 20 integrated circuits. Bob Pease was loved by the analog community and we celebrate Bob's passion for analog.

East Coast Beginnings

After attending Northfield Mount Herman High School in Massachusetts, Bob earned a Bachelor of Science degree in electrical engineering from MIT in 1961 and started working at George A. Philbrick Researches. The Boston-based company launched the commercial use of the operational amplifier in 1952. There Bob worked on affordable mass-produced op amps using discrete solid-state components. He passed up an opportunity to work at nearby Analog Devices and instead moved to the San Francisco Bay Area to work at National in 1976, which had rapidly become one of the top three US semiconductor companies on the strength of its analog technology.

Among the semiconductor products Bob designed are temperature-voltage frequency converters used in groundbreaking medical research expeditions to Mt. Everest in the 1980s. He also designed a seismic pre-amplifier chip used to measure lunar ground tremors in the US Apollo moon landing missions. Among his more memorable designs are the LM331 voltage to frequency converter and the LM337 adjustable voltage regulator.

"Bob Pease was one of those analog engineers who spanned the semiconductor industry's early history," said EDN columnist Paul Rako, a former colleague. "He started working on vacuum tubes and discrete components, then monolithic analog circuits with the planar process. Later in his career he put all of this accumulated knowledge to use as an applications engineer. That's what gave him such breadth."

Analog Seminars & Pease Porridge

Bob's reputation grew as he shared the secrets of analog design with engineers around the world via National's Analog Seminars. Bob's passion for sharing information knew no bounds. He worked long hours from home as well as at National answering phone calls and emails from anyone with questions about analog design: customers, students, veteran engineers—it didn't matter.

"Discussing the solutions made one think differently and look at alternative possibilities," said strategic technologist Don Archer. "It was a fun time working with Bob and he loved working through difficult problems to find elegant answers."

During his tenure, he began writing a continuing popular monthly column in Electronic Design magazine entitled "Pease Porridge" about his experiences in the world of electronic design and application. Stories often started with his trademark expression "What's All This [topic] Stuff, Anyhow?" He also wrote for EDN magazine for a time. He authored

eight books, his most popular being "Troubleshooting Analog Circuits." He also had his own his own website at National.com (download pdf 19.7MB) with the subtitle, "What's All This Homepage Stuff, Anyhow?" where you can find "several kinds of useful information" as well as Bob's passion for Nepal and its people.

Analog by Design Show

Starting in 2003, Bob hosted the semiconductor industry's first online webcast tailored specifically for analog design engineers. The "Analog By Design Show" was an engineering talk show by engineers for engineers. Early segments of the half-hour talk show included co-hosts Paul Rako and Paul Grohe, plus a guest expert. As Bob's reputation grew and he became a face of National, his persona grew as well. His image was featured in many promotions, often with a humorous slant. Behind the humor, there was always a serious note around engineering excellence. As part of a campaign to help engineers avoid repeating old mistakes in their new band gap reference circuits, Bob donned an outlandish Czar of Band-Gaps uniform.

"Bob Pease goes back to the wild days of analog design," Rako said. "This is when a core group of passionate engineers and scientist would work hard, play hard, and do as they pleased."
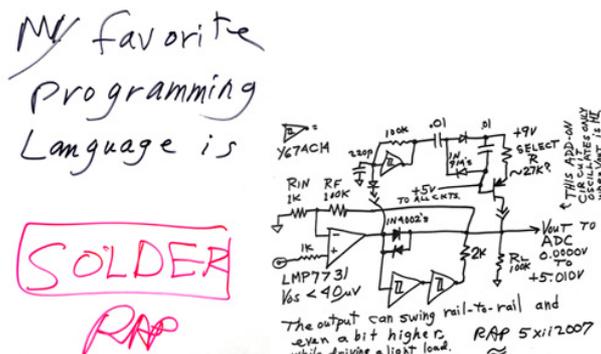

The Right Stuff

Recently Bob was working on material called "How to Choose an Op Amp" featuring sage advice and his inimitable style. He was also updating the popular application note, AN-31, a collection of op amp circuits dating back 1969. He was in the process of writing about the history and evolution of these circuits and the best ways to implement these circuits using today's op amps.

Bob received many awards for his work, including the Lifetime Achievement Award from the Embedded Systems Conference (2010) and Electronic Design magazine's Electronic Engineering Hall of Fame (2002). He was listed as one of the top 10 analog engineers of all time in a 2009 EE Times story.

TI Fellow Dennis Monticelli remembers Bob as a helpful colleague and friend. "We go way back to my days as a green engineer when his gregarious personality and sheer knowledge drew me in. Bob was always generous with his time and never forgot what interested you whether work-related or not. He could multi-task like no other, yet also dive deep and narrow into esoteric areas. While famous for his analog expertise and passion for seat-of-the-pants engineering, his interests were actually quite broad and he would gladly engage on a wide variety of subjects. I will miss him yet take solace in the fact that his legacy lives on in the hearts and minds of true analog engineers everywhere."

"The industry has lost an analog giant," said former National CEO Don Macleod. "Bob Pease was an extraordinarily talented engineer who cared deeply that others gained the knowledge they needed to advance their own work. He was a spokesperson for us for many years, with a worldwide following."

Bob Pease is a hero of the analog world. We will miss him greatly.
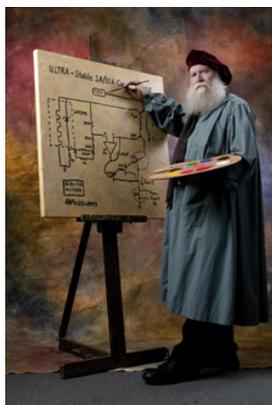
Bob's Stuff

The Best of Bob Pease Website (pdf 19.7MB)

Download Bob's National website and navigate the pages on your computer

Bob Pease Lab Notes 2005
(What's All This Common Mode Rejection Stuff, Anyhow...) (pdf)

Pease Porridge Column at Electronic Design

Troubleshooting Analog Circuits Book (Amazon)

Friends' Stuff

EE Times (Bill Schweber)

EDN (Paul Rako)

Honoring Bob (Paul Rako, EDN)

Bob Pease's Office (YouTube video from Paul Rako)

Walt Jung Remebers Bob Pease (EDN)

A Bob Pease Photo Gallery (Paul Rako, EDN)

EEWeb Interview

Bob Pease Didn't Hate SPICE Models (Paul Rako, EDN)

Remembering Bob Pease The Writer (Don Tuite, Electronic Design)

PCB Design 007 Panel Interview

Bob Pease Remembered for Pease Porridge and a Whole Lot More (Joe Desposito, Electronic Design)

An English Major Remembers an Analog Giant (Richard Gawel, Electronic Design)

Analog Engineering Legend Bob Pease Remembered by Friends (Paul Rako, EDN)

Sheingold, Titus, Thompson, Hanrahan, Franco, et al on Bob Pease (Paul Rako, EDN)

Charity

Bob supported the Nepal Youth Foundation, helping Nepalese children live better lives

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