

10 INVENTIONS MADE in the CSU



THE VIDEOTAPE RECORDER

San José State alumnus Charles Ginsburg developed the first videotape recorder in 1951. The National Inventors Hall of Fame has credited him with “one of the most significant technological advances to affect broadcasting and program production since the beginning of television itself.”



THE MICROPROCESSOR

In 1971, Intel engineer and **San Francisco State** alumnus Stanley Mazor co-invented the world’s first microprocessor, the Intel 4004. In 2010, he was awarded the National Medal of Technology and Innovation by President Obama for his pioneering work.



MODERN HOME SECURITY

Chico State professor and alumnus Bill Wattenberg has eight patents to his credit, including the first home alarm system using electrical wiring.



AUGMENTED REALITY

In 1991, **Cal Poly San Luis Obispo** professor Louis Rosenberg developed one of the first-known augmented reality systems. Augmented reality superimposes a computer-generated image on a user’s view of the real world and is used in many applications including Google Glass.



THE WATERBED

In 1968, Charles Hall presented the waterbed as his master’s thesis project at **San Francisco State**. The vinyl mattress was designed to be a piece of furniture that would eliminate pressure points and use heat to relax muscles.



DNA ANALYSIS METHOD

Humboldt State alumnus Peter Underhill was part of a team that patented a process called Denaturing High Performance Liquid Chromatography, which quickly compares chromosome nucleotides in DNA.



BLUETOOTH

Intel mobile computing engineer and **Fresno State** alumnus James Kardach was part of the team responsible for creating Bluetooth technology, which powers wireless communication between electronic devices.



RAPID TUBERCULOSIS TEST MACHINE

Humboldt State alumnus M. Allen Northrup created GenXpert, an automated test that shortens the time to diagnose drug resistant strains of tuberculosis from weeks to only a few hours.



BOTTS’ DOTS

In 1951, Caltrans engineer and **San José State** alumnus Elbert Dysart Botts oversaw research that led to the development of these road markers, also known as road turtles or buttons. Today, there are more than 25 million on California’s roads.



MICROCYN

Sonoma State alumnus Hoja Alimi founded Oculus Innovative Sciences, which manufactures Microcyn, a tissue care product that enhances healing in open wounds while reducing the need for antibiotics.