

Elographics and Sam Hurst

(As published in The Oak Ridger's Historically Speaking column the week of August 10, 2026)

Before we explore Elographics history we should get to know Dr. Sam Hurst who was instrumental in its creation. Sam was born October 13, 1927, in Bell County, KY. At age 15 he entered Berea College where he began his study of physics. Ultimately, he earned a Ph.D. in physics at the University of Tennessee in 1959. He was recruited to Oak Ridge National Laboratory by Karl Morgan in 1948 where he worked until 1966, at which time he accepted a position at the University of Kentucky teaching physics.

While at ORNL he did research on the development of radiation detectors and instrumentation, neutron dosimetry and spectroscopy, and field sample analysis. He was included in two nuclear weapons tests at the Nevada Test Site to monitor and document radiation exposures.

It was while he was at the University of Kentucky that the beginnings of the technology that would cause him to create Elographics was first conceived. The company would grow to the point that in 2025 it was acquired for \$1.3B.

Dr. Hurst was awarded three IR-100 Awards and seven other honors, held 15 patents, and founded or co-founded five companies. But his most highly recognized accomplishment is the creation of the touchscreen technology that is so prominent in all we do as we interact with electronic media today.

Much of the information in this Historically Speaking column comes from the following source:

<https://elosupport.elotouch.com/hc/en-us/articles/31649426357911-Where-can-I-find-information-about-the-history-of-Elo-Touch-Solutions>

It is an online archive history adapted from Elo's Touching Moments. It was edited by Debi Brown, Cheryl Steinbacher, Tonya Turpin, Rhonda Butler, and Chuck Bales. There are special contributions by Connie Smith and Betty Colwell. The photography in the archived history is by Chuck Bales and Richard Gardner.

With that reference to let you know where you can learn even more about Sam Hurst and the touchscreen technology we all use thoughtlessly today, let's look at how that was invented in Oak Ridge.

Sam Hurst was employed by Oak Ridge National Laboratory prior to 1970. The Elo website has an AI assistant named, "ēlo.AI" (I have come to appreciate AI increasingly). I asked, "When did Sam Hurst work for ORNL?" Here is ēlo.AI's response "Dr. Sam Hurst worked for Oak Ridge National Laboratory (ORNL) before taking a two-year leave to teach at the University of Kentucky, and he returned to Oak Ridge in 1971 to start Elographics. The specific years at ORNL aren't detailed, but his association with ORNL was before and around 1971."

What I also learned from the online archive is that Sam "needed to read a huge stack of strip chart data. It would have taken two graduate students approximately two months to do the task. He started thinking of a way to read the charts, and during the process, the "Elograph" (electronic graphics) coordinate measuring system and Elographics the company were born. The University of Kentucky Research Foundation applied for and was granted a patent on the Elograph. The Foundation granted an exclusive license to Elographics."

In March 1971 Elographics was formed as a company. Here is ēlo.AI's response to "When was Elographics formed as a company?" "In March 1971. How cool is that? It all started with just ten stockholders and a big idea that would eventually lead to the invention of the touchscreen!" What fun, huh. Well, let's get down to the details now...

Sam asked nine others to join him as stakeholders to form the company to manufacture and market the product produced because of the realization that a method which allowed quick access to points on a screen would speed up access to data and improve utilization of information. The company first existed in three basements. Soon a location in Four Oaks shopping center was added. The final assembly and

Elographics and Sam Hurst

(As published in The Oak Ridger's Historically Speaking column the week of August 10, 2026)

shipment of the product was done there. The basements were still used for the actual manufacturing operations.

25 E-100 model units were sold in the remainder of 1971. Massachusetts Institute of Technology bought the first E-100 model. By 1973, through announcements in a few trade journals, such as Electronic Design on November 28, 1971, Industrial Research in December 1971, and Instrument and Apparatus News in December 1971, sales grew quickly. From the Elo Touch archived history, "In 1973 Elo won the I-100 award for having one of the one hundred most significant new technical products of the year."

A brief account of what happened in the two-year interval after Elographics won its IR 100 award will be published in an upcoming Historically Speaking column featuring Jim Palmer's recollections of his time with Elographics.

After that, things grew quickly. Research and development continued as more applications of the technology became apparent. But things were about to take an amazing jump.

Bill Gibson came on board as president in 1977. Soon after "Siemens Corporation came to us and offered to back Elo in the development of a curved glass sensor, which later was called a touchscreen, as it was activated by touch." According to the archive. So what does Elo have to say about this?

"The touchscreen was first born through the hard work of Bill Colwell and Dr. Hurst, who developed the original AccuTouch products and secured a key patent for separator dot technology. The world got its first real taste of touchscreens in 1982, when Elographics (now Elo) displayed 33 televisions fitted with transparent touch-sensitive panels at the World's Fair in Knoxville, Tennessee. This was a groundbreaking moment—many people experienced a touchscreen for the very first time! The technology has only grown from there, becoming a huge part of our daily lives."

The following quotes in the next nine paragraphs come directly from the archive history. "In late Fall of 1982, the first computer system was installed in the company. In May of 1983, the company moved to its Grove Center location and began expanding. In December of 1984 Elographics was honored as the 149th of Inc. Magazine's 500's fastest growing privately held companies.

"During 1985/1986 what was thought to be a small service (monitor integration) was also offered to customers. This business has since developed into an important part of our company.

"In early 1987, two new technologies were purchased. The surface acoustic wave product, named IntelliTouch, was purchased from Zenith. Early in 1988, a production facility was established in California to manufacture and sell this product. The other technology was purchased from Kennedy Technology. This product was a four-wire resistive technology and was subsequently named DuraTouch. This product line has since been phased out.

"1991 became a year of excitement and change. Elographics started on the path to a Total Quality Management philosophy. Process improvements and team activities took over the company. Through empowerment, education and the continuous improvement philosophy, the company started its journey to becoming World Class.

"Both AccuTouch and IntelliTouch products experienced numerous process improvements, better yields and lower costs. 1992 brought opportunities for sharing the company's successes. Elographics participated as guest speakers in a Quality Leadership Symposium, to share success stories using advanced statistical methods (design of experiments). But continuous improvement never stopped and by Fall of 1992, Elographics announced its initial action plan to become ISO (international Standards Organization) 9001 certified.

Elographics and Sam Hurst

(As published in The Oak Ridger's Historically Speaking column the week of August 10, 2026)

"On February 24, 1994, the company officially changed its name from Elographics to Elo TouchSystems. This allowed Elo to keep the well-deserved reputation it had built by keeping Elo as part of the name and the addition of Touch brought name association with touch products.

"In August 1994 Elo TouchSystems achieved ISO 9001 Certification, which provided a level of controlled documentation that helped measure control of our processes. Continuous improvement and team activities were on going. The company has continued the path to World Class by providing more & more jobs and delighting our customers. The company currently has numerous proprietary designs.

"In March 1995 Elo TouchSystems acquired IQ2000 Automation GmbH, a value-added touchscreen integrator and distributor located near Munich, Germany. In July the company was renamed Elo TouchSystems GmbH. Elo TouchSystems also introduced the longest touchscreen warranties in the industry.

"In 1996, Elo announced plans to consolidate its Oak Ridge, Tennessee, and Fremont, California facilities in the Bay Area to facilitate company growth and a closer relationship with Raychem Corporation, Elo's parent company. During this time of transition, Elo's Oak Ridge employees spent hundreds of hours training their successors while continuing improvement techniques, team activity and a level of camaraderie unmatched by any other company."

The next 30 years saw continued growth and expansion of the company. The reach became world-wide. The company focused on commercial touchscreen technology and sales. Some financial transactions resulted in the company being purchased several times.

The Gore Group acquired Elo from TE Connectivity (NYSE: TEL) in June 2012.

Crestview Partners acquired Elo from The Gore Group in August 2018.

In August 2025, Zebra Technologies acquired Elo Touch Solutions, Inc. for \$1.3B!

In February 2026, WBIR published the following:

<https://www.wbir.com/article/news/history/the-touchscreen-revolution/51-356d499a-6868-4083-b9d3-075a0c5b72e2>

The next seven paragraphs are quotes from that source: "In August 2021, the company opened a 90,000-square-foot facility in Knoxville.

"Nathan Swisshelm, Elo's global supply chain vice president, said the location allows the company to efficiently serve customers across the eastern United States.

'Seventy percent of our customers are on the east side of the Mississippi,' Swisshelm said. 'We can have products arrive at the port and within a day have those products here at our warehouse, and we're about a day away from all of our major customers as well.'

"The Knoxville facility receives touchscreen monitors, computers and accessories from manufacturing sites, distributes them to customers and performs repairs and modifications.

"Behind the simplicity of a touchscreen lies complex engineering, Witsoe said, including processing power, circuitry, chemical coatings and software.

Elographics and Sam Hurst

(As published in The Oak Ridger's Historically Speaking column the week of August 10, 2026)

'The great part is all of that technology comes together, but when the customer uses it, it just seems easy,' he said.

"More than five decades after its founding, the company continues to expand.

'Innovation creates jobs, creates opportunities," Witsoe said. "We used to talk about over 50 million that have been installed in the world. Honestly, I think we've probably lost count, but they truly are everywhere."

So, Sam Hurst created what became the touchscreen technology in Oak Ridge and the company has just kept on growing and expanding its reach. Now touchscreen technology is just taken for granted. Yet another of the amazing scientific advances that impact the world to come from Oak Ridge.



Dr. G. S. "Sam" Hurst (left), founder of Elographics, Inc. The Elograph was selected by Industrial Research as one of the 100 Most Significant New Technical Products of the Year 1973 (Courtesy of the Elographic website)

Elographics and Sam Hurst

(As published in The Oak Ridger's Historically Speaking column the week of August 10, 2026)



A technology that we use all the time without giving it a thought as it has become so common (Courtesy of Ray Smith)