## 2020 End of Year Report

2020 was a unique year for the museum since we've been closed since mid-March. We focused this year on improving our on-line experience, communicating with over 1,000 associates through our monthly newsletter, adding videos for our over 8,500 subscribers, and continued to make some new and rare acquisitions for the museum.

The museum's mission is to support STEM and encourage the next generation of engineers so it is only appropriate we started the year with a remote exhibit at the University of Portland's Family STEM Day which was quite rewarding. We had three





hands-on exhibits for children and adults consisting of Scope Art, Time of Flight, and the ever popular Tennis. The booth was packed all day with both children and their parents learning about electronics, measurement, and oscilloscopes.

The museum supports MESA (Math, Engineering, Science Achievement), a pre-college academic program hosted by Portland State University that equips underrepresented students with STEM (Science, Technology, Engineering and Math), invention, and 21st-century skills. Tektronix was instrumental in founding MESA in 1985 and the museum was a Silver Sponsor for their 35th Anniversary Gala Event which unfortunately was cancelled due to Covid-19. Instead they held an on-line 35th Anniversary Gala Fundraiser in which the museum participated and we remain a sponsor of their Anniversary Gala which hopefully will be held in 2021.

Like other companies we've turned to Zoom to hold weekly meeting with our volunteers to manage museum operations. This year we had two new volunteers join the museum. Chris Curtin joined Tektronix in 1963 as a CRT engineer and rose to the General Manager of Display Devices Operations (e.g. CRT). He brings a wealth of CRT knowledge to the museum and has helped with research and web content. He is currently working with our over 4000+ negatives and photos to organize and match photos with names and events. We have

posted a few of the unique photos on our Odds and Ends page showing employees assembling Tektronix instruments in store window displays in the 1950s. Other photos have been featured on our Photo of the Month page.

Hale Farley, our other new volunteer, lives in California and has been helping us with research and first-hand information. Hale started in August 1973 as the Signal Processing Systems Marketing Engineer but soon moved to Sales Specialist in Santa Clara. He was involved with the 7912 Programmable Transient Waveform Digitizer and authored the story Tektronix Measurements of EMP from Nuclear Detonation on his experience of working with the Air Force's Project Trestle. The Tektronix Project Trestle system was quite impressive occupying 12 full racks as shown in this 1979 pre-shipment photo.



We also solicited several other customer and employee stories:
- Instrument Trailers for Nuclear Diagnostics by Stanford employee David Diffenderfer
- Remembering Tek Guernsey by Les Horn
- Tektronix Gets Into The Spectrum Analyzer Business: The Story Behind The Story, Behind The Story by Morris Engelson. Morris was one of the three founders of Pentrix which Tektronix acquired to enter the Spectrum Analyzer business in 1964.
- The Almost Tektronix Digital Network Analyzer by Dave Squire
- The 556 Story by Phil Crosby

We also added these stories that were previously published elsewhere.
- Tek UK - The Early Days - 1963/1964 by Harry Sellers
- Tektronix Scanning Electron Microscope History by Donald Chitwood
- Tektronix R7912 Programmable Transient Waveform Digitizer by Hale Farley

Two other "stories" involved space exploration. We were able to track down Morley Blouke who worked on Tektronix CCDs which were installed on the Hubble Space Telescope. Unfortunately when the infamous mirror issue was corrected these CCDs were replaced. The CCD group was spun out as Scientific Imaging

Technologies, Inc. (SITe) and their CCDs also were later installed on Hubble so technology developed at Tektronix found its way to the Hubble Space Telescope twice.

The other story is told through a [series of memos](#) in the early 1960s about the possibility of having a Tektronix oscilloscope on the Lunar Excursion Module (LEM). North American Aviation (NAA) thought the astronauts might need to use an oscilloscope outside the LEM for any repairs on the lunar surface!  Nothing obviously came of this but the memos are an interesting read into the excitement of the early Apollo program.

We worked to acquire new and rare instruments for the museum. The most notable include:

- [121 Preamplifier:](#) This 1950 instrument was used to increase the vertical sensitivity of the 511 for medical applications
- [517 High Speed Oscilloscope:](#) This 1951 oscilloscope broke the performance barrier with 50 MHz bandwidth. It consisted of 130 vacuum tubes and weighed over 175 pounds. We believe this is the only working 517 oscilloscope in the world.

- [7612D Programmable Digitizer](#): This digitizer achieved 80 MHz bandwidth using a Tektronix custom ADC (analog to digital converter) consisting of a hybrid [T7610 CRT-semiconductor converter tube](#). Dan Knierim also contributed a story of how the T7610 led to [effective number of bits](#) and the IEEE Standard 1057 for Digitizing Waveform Recorders.

- [7520 Transient Digitizing Oscilloscope:](#) This oscilloscope achieved 6 GHz bandwidth and was the fastest analog oscilloscope offered by Tektronix.
- [570 Tube Curve Tracer:](#) This was introduced in 1955 and is still highly sought after by audio aficionados for matching vacuum tubes.
- [Hughes Memo-Scope:](#) Although not a Tektronix product, it was the first oscilloscope with storage, although expensive with poor reliability and performance. [Bob Anderson](#) came to Tektronix from Hughes and was inspired to do better and perfected an affordable and reliable bi-stable storage CRT. This enabled Tektronix to dominate the storage oscilloscope and computer graphics markets for the next 20 years.

Astute followers of the museum continue to send us new movie and show sightings. We now have [38 movies and shows](#) that feature Tektronix products. A crowd favorite is still the GVG Model 1600 Switcher used to fire the Death Star in the first Star Wars movie. We've even added some more sightings to our [Tektronix in Music](#) page.

The museum operates on contributions, and modest eBay sales and the generosity of Tektronix in hosting our space. We sold over 200 instrument manuals and books on eBay this year to collectors and restorers and our volunteers restored some classic  500-series instruments which were also sold on eBay. Contributions are down with the closure of the museum so we registered to receive contributions through the [Amazon Smile Charity](#) program.

We continue to publish our [Photo of the Month](#). We frequently use this page to solicit input on unknown photos or to identify individuals in photos with good success. This very early photo of a dual screen instrument though had no suggestions. Our best estimate is a custom instrument prior to 1952 for a doctor doing experimental work on heart problems. The oscilloscope was fitted with a camera so that the display could be recorded
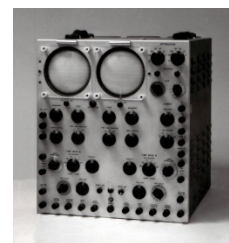
Volunteers researched and participated in video interviews conducted by the MJ Murdock Charitable Trust for their production of a new video biography on the life of Tektronix co-founder Jack Murdock. We also obtained some 1952 photos of a skiing trip to Sun River organized by Jack. There aren't many informal photos of Jack so these are a nice addition.

The museum continues to support Tektronix collectors and restorers through repairs, support by email, participation in various Tektronix forums, and obsolete parts and module sales. One interesting correspondence was with Alan Hampel, an electronics engineer and former test equipment service technician in Australia. He purchased a vintage 130 LC meter, did a detailed restoration, and wrote an extensive article for Silicon Chip magazine that was published in three parts in June, July and August 2020. We believe the 130 was the longest running Tektronix instrument in production for 21 years and we received permission to host his articles on our website. In addition museum volunteers produced several vintage instrument repair videos which we host on our Repair Tips and Reference Material page.

Our website continues to grow. We created more than 20 new pages this year including the first 20 Annual Reports, a number of Tek Times, the UK newsletter from the late 1970s and individual employees and anniversaries. We added content to many other pages such as Tek Talk, the company newsletter, which now includes 114 issues covering May 1951 through Winter 1970. We've enhanced many of the site pages including China, Guernsey, Hoddesdon, Heerenveen, India, and Japan (Sony/Tek) to better address our worldwide audience. We've added significant content and photos covering early company history at the Hawthorne, Sunset, and Beaverton sites. We've expanded our on-line exhibits to over 82 pages which provides more detailed information, especially for those that cannot visit the museum in person. We added six new videos including a vintage film from the 1960s highlighting internal component manufacturing capabilities. Our videos have been viewed 63,000 times for over 6,600 hours in just 2020. In all, the website has grown to over 660 pages and ~ 100,000 page views a year, all documenting the legacy of Tektronix and those employees who created this legacy.

Lastly, we were saddened by the passing of museum co-founder Stan Griffiths in January. He is the author of the classic book on the selection, restoration and maintenance of Tektronix oscilloscopes. The museum republished his book and also offers Tektronix co-founder Miles Tippery's book on the early history of Tektronix, both on our eBay store.
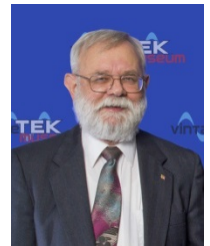
This was certainly a very different year for the museum but thanks to the dedication and energy of our volunteers we continued to make progress in many different areas. Our on-line efforts continue to make the museum resources available to our worldwide audience who are not able to visit in person.

Our kindest thanks to Tektronix for their generosity in hosting space for the vintageTEK museum. We look forward to hopefully being able to tour visitors and support STEM events sometime in the near future.

David J. Brown
vintageTEK President