

Through the Ages!

Open House and Legacy Exhibit

September 13, 2017 – 1:30 to 3:30 PM

Unisys

3199 Pilot Knob Road
Eagan, MN 55123



Engineering Research Associates (ERA) shipped an ATLAS computer via rail-cars to Washington, D.C. in October 1950. "It's my belief that the ATLAS I was the first American stored-program electronic computer to be delivered - delivered in finished, working condition." observed Dr. Arnold Cohen. Titled ERA 1101 for commercial sales, existence of the ATLAS application was classified into the late 60s. This was the beginning of the 1100 family of commercial computers as well as a plethora of Defense Industry computer based systems. ATLAS II [also classified] was the technology base for the ERA 1103.

An ERA/UNIVAC 1103A was the start of the University of Minnesota's Computer Science Department under Dr. Marvin Stein in 1958.

Many of our computer systems have had 3 to 4 decades of high reliability operational use with seven+ decades of software and hardware innovations and solutions to customers' problems. More than computers, systems included peripherals and application software.

*Open House & Exhibit hosted by **Unisys** and retiree volunteers.*



Through the Ages!

1 SHADOWBOXES

Sperry-UNIVAC in Roseville had an earlier sense of history in the 80s, thus began to illustrate computer technologies with a series of wall mounted shadow box displays. Harry Smuda [Management] and Dick Petschauer [Engineering] led the creation of these shadowboxes. The first has the 1953 1103 computer components, including a vacuum tube logic module.

After the Burroughs buyout of Sperry in 1986; the resulting UNISYS Company kept the displays - adding to them as new commercial computer systems were developed in the 90s.



1103 in 1953 to the IX5800 in 1996
<http://vipclubmn.org/Articles/ATLASEvolution.pdf>

UNISYS management moved the shadowboxes from Roseville to Eagan this summer to preserve our history. Unisys Roseville was in operation 1964 to 2017. Unisys Eagan opened in 1987, consolidating several Sperry and Burroughs Twin Cities facilities in this facility on Pilot Knob Road.

The technologies within these shadowboxes are more than just pieces of hardware and informational text. The boxes represent the technologies of over 10,000 computer systems developed, manufactured, delivered, and installed since 1950.

These shadowboxes also represent the 10s of thousands of current and former employees who innovated, designed, built, programmed, and supported these computer systems not only in Minnesota but throughout the world. For example, Roseville management and engineers led some 1100 series systems manufacturing in Rödelheim Germany.

In addition to the 16 Systems' shadowboxes; the exhibit includes seven fiscal year shadowboxes illustrating the micro-technologies developed at the then Eagan located Semi-Conductor Facility and integrated into computer systems by Roseville engineering.

<u>System type No.</u>	<u>1st unit</u>	<u>last built</u>	<u>qty</u> ¹
1101	1950	1953	3
1102	1952	1955	3
1103	1953	1956	11
1104	1954	1959	10
1103A	1956	1959	19
1105	1957	1960	10
1107	1962	1965	38
1108	1965	1975	303
1106	1969	1976	338
1110 & 1100/40	1972	1979	455
1100/10/20/30	1975	1980	359
1100/80	1976	1985	1121
1100/60	1979	1988	2863
1100/70	1982	1987	77
1100/90	1983	1990	1318
1110 & 1100/40	1972	1979	455
1100/90Dyad	1987	1988	28
System 11	1984	1988	603
2200/200	1986	1990	966
1100/70 Dyad	1987	1988	28
2200/400*	1988		901
2200/600*	1988		438
2200/100*	1989		131

¹ Build quantities extracted from papers donated to the VIP Club Legacy Committee. *Last build date after 1990.

2 LAWSHE MEMORIAL MUSEUM



In 2011 the Dakota County Historical Society board agreed to accept the Legacy Committee's artifacts and to establish a permanent exhibit. Lockheed Martin (LMCO) in Eagan had been providing the legacy committee working and artifact storage space. As LMCO closed their Eagan facility in 2012, artifacts, documents, and photos were transferred to the DCHS Lawshe Memorial Museum. Led by then DCHS Director, Chad Roberts, a State of Minnesota Legacy Grant and VIP Club volunteers

cataloged the 1,000+ artifacts and began exhibit planning.

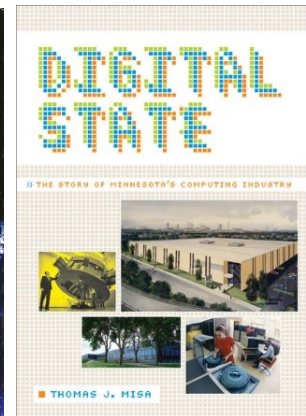
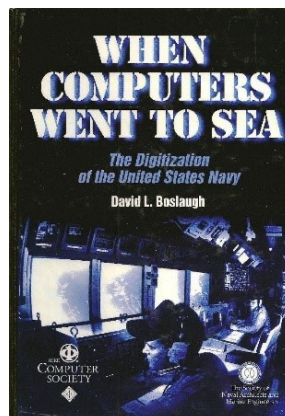
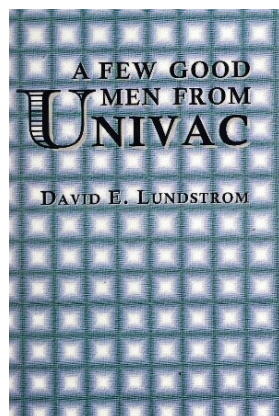
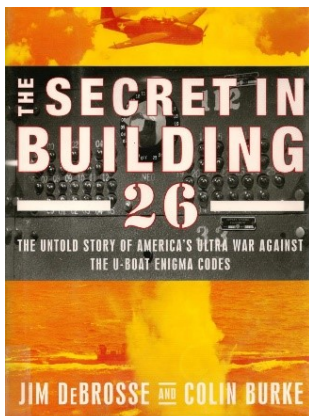
A second MN Legacy Grant and Club volunteers then developed the 'educational posters' on display at this open house. This 2nd grant and equipment from LMCO also facilitated five workstations at the museum. Volunteers are using this area to catalogue and identify over 20,000 photos of the Legacy collection and to integrate the information into the museum's collection database.



At the museum, exhibits are setup around the periphery of the great room. This early exhibit snapshot shows a space borne missile guidance computer and a desk set with components from the Athena computer that had over 300 successful missile launches from the Cape and Vandenberg AFB. Note that the 1100 series computers also played a prominent role at the Houston space center. Shuttle communications came via the UNIVAC type 1218 and UNIVAC type 418 computers, also developed in the St. Paul environs.

3 STORIES OF OUR INFORMATION TECHNOLOGY LEGACY

In 2006 the Legacy Committee began a 'Legacy Anthology' web page, inviting employees and retirees to submit their career summaries and product/project/program stories. To date over 300 people have contributed to our history, displayed for the world to read at <http://vipclubmn.org/Legacy.html>. These four books tell parts of our story; for example, ERA and Bill Norris are discussed in each book.



Add Your Career Summary or Project/Product/Program Story? Send it to webmaster@vipclubmn.org.

4 MORE THAN HARDWARE ARTIFACTS

Foremost throughout this Legacy are the people; most now enjoying retirees' camaraderie; others still working at UNISYS, LMCO, and other high-tech companies in Minnesota and throughout the states; and so many who have passed away.

4.1 PEOPLE

The founders of ERA were Howard Engstrom, Ralph Meader, William Norris, and John Parker. During WWII; Engstrom, Meader, and Norris were tied to a classified Navy unit called Communications Supplement Activity-Washington. Parker headed Northwestern Aeronautical Corporation that built WWII Army Air Corps gliders in a St. Paul, MN factory.

4.2 SPIN OFF ORGANIZATIONS²

Technology managers and engineers by nature look for new opportunities. This led to many companies created by people from 'UNIVAC'. This genealogical tree of Minnesota's computer companies begins with ERA in 1946! Most people don't realize that Control Data Corporation was the second Minnesota computer company led by William 'Bill' Norris. BTW, Seymour Cray began his computer career at ERA in 1951.

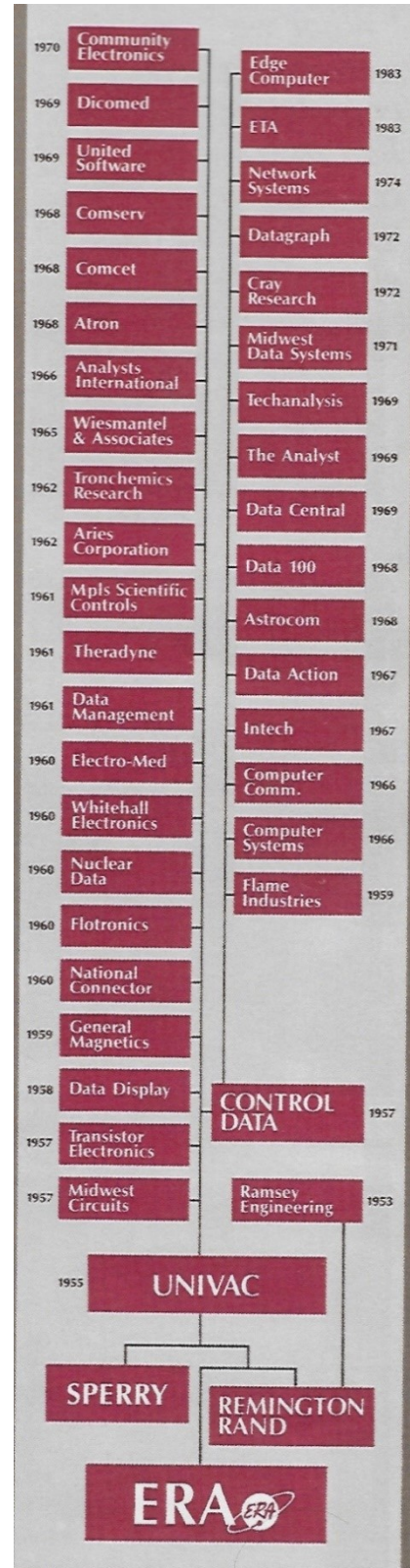
4.3 VIP CLUB LEGACY COMMITTEE

The committee began at the October 2005 VIP Club board meeting. Richard 'Ole' Olson representing LMCO and Lowell representing the Club volunteered to be co-chairs. Dick Lundgren arranged a meeting with Dr. Norberg at the Charles Babbage Institute (CBI). Endowed by U of MN private donations, the CBI Director holds the 'ERA Land Grant Chair for the History of Technology.' Dr. Tom Misa, as CBI Director 2006/2017, was our committee advisor for archiving and preservation.

The Legacy Committee and project set three priority objectives:

- to capture whatever remaining material and information we can,
- to catalog and archive all the material collected, and
- to publish/publicize our history and heritage in a way that could interest others within our industry and our fellow Minnesotans.

In addition to the artifacts at the museum, the committee has contributed over 1,000 documents to the Charles Babbage Institute.



² This 'Spinoff' genealogy chart scanned from a 1986 Sperry booklet commemorating ERA's 40th anniversary.