

Recap, ERA History Initiative

Lowell A. Benson – UNIVAC 1960→Unisys 1994, VIP Club 2005→today.

1 INTRODUCTION

19 years ago, the VIP Club formed a Legacy Committee with the purpose of *Telling the Story* of Engineering Research Associates (ERA). ERA opened for business on January 8th, 1946, in St. Paul, MN with an office in Washington DC. The ERA corporate lineage in Minnesota is now in its eighth decade as illustrated by this Legacy Companies name icon.

This VIP Club *Telling the Story* quest has also had cooperative initiatives by the Charles Babbage Institute (CBI), the Computer History Archives Project (CHAP), the Dakota County Historical Society (DCHS), the Minnesota Historical Society (MHS), the Minnesota Hi-Tech Association (MHTA), the Ramsey County Historical Society (RCHS), and the Twin Cities Public television (TPT). Thanks to all who have contributed and participated.



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Paper created with Microsoft Word.



THE VIP CLUB IS FOR RETIREES AND FORMER EMPLOYEES OF OUR GREAT HERITAGE COMPANIES

Figure 1. Corporate logo sequence.

2 BACKGROUND

In 2005, Lockheed Martin Corporate (LMCO), motivated by the realization that their current company was created from over 20 predecessors, asked their operating units to “capture their legacy” for Lockheed’s 100th anniversary in 2012. At LMCO in Eagan Minnesota, Richard ‘Ole’ Olson was tasked to respond; he formed an ad hoc group of employee volunteers and then contacted the VIP Club Board to form a corporate and retirees Legacy Committee.

2.1 LEGACY COMMITTEE

The committee began at the October 2005 VIP Club board meeting. Ole representing LMCO and Lowell representing the Club volunteered to be co-chairs. Dick Lundgren was the first to join the committee, he arranged a meeting with Dr. A. Norberg at the Charles Babbage Institute, <https://vipclubmn.org/Articles/FirstVisitToCBI.pdf>. Endowed by University of Minnesota (U of MN) private donations, the CBI Director holds the ‘Engineering Research Associates Land Grant Chair for the History of Technology.’

Dr. Tom Misa, the second CBI Director 2006/2017, became our committee advisor for archiving and preservation methods, <https://vipclubmn.org/Exhibits.html#CBI>. CBI has archived many ERA/UNIVAC/Unisys and other technology company history documents. The Club has sent several pallets of documents to CBI; a few former employees also donated their papers.

In November 2007, Harvey Taipale wrote: "The committee quickly realized that the history of Engineering Research Associates (ERA), continuing to the present, was a remarkable story of technological innovations and contributions to the computer industry in general and specifically Minnesota. This story, particularly the early years, has never really been completely told; e. g. the ATHENA computer launched over 300 missiles at the beginning of the space age with never an abort caused by the computer system! To be sure, there are some accounts written from the business history perspective, from various customer and user perspectives, and partial documentation or timelines in many places. However, we are unaware of any account which properly gives credit to the ingenuity, vision, and hard work of ERA and its successor company employees, and their contributions to Minnesota and the world. The legacy committee feels that it would be a terrible loss not to capture the full history, thus inspiring our efforts to determine just what can be accomplished. There is a bit of urgency, as the memories and materials relating to ERA are rapidly disappearing. Our pioneers are dying, successor corporations are shredding records, and memories are fading."

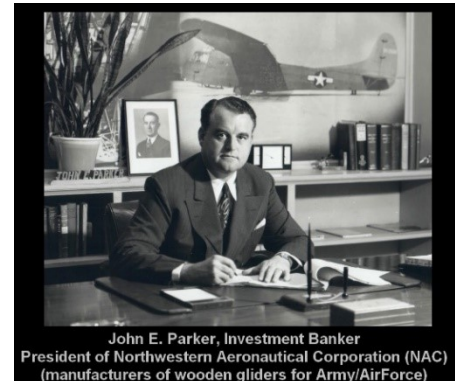
In 2008 Richard Olson retired from LMCO and [John Westergren](#), LMCO Executive of Interest, stepped in as Legacy Committee co-chair.

In 2012, we began the exhibit of artifacts at the Lawshe Memorial Museum. Thanks to then museum Director Chad Roberts and to LMCO’s John Westergren who effected artifact transfers from the Lockheed Martin Eagan facility to the museum’s storage areas.

3 THE STORY

3.1 ERA FOUNDERS

The founders of ERA were John Parker, Howard Engstrom, Ralph Meader, and William Norris. During WWII, Mr. Parker¹ had headed Northwestern Aeronautical Corporation that built WWII Army Air Corps gliders in a St. Paul, MN. Engstrom, Meader, and [Norris](#) were tied to a classified Navy unit called Communications Supplement Activity-Washington (CSAW). A summary of the glider history is <https://vipclubmn.org/Articles/Plant2History.pdf>. A rebuilt glider is now at <https://www.fagenfighterswwiimuseum.org/>.



3.2 FIRST COMPUTER DELIVERY

Engineering Research Associates (ERA) shipped an ATLAS computer via railcars to Washington, D.C. in October 1950. It was accepted and used for classified work in Dec. 1950. In 2001 Harlan Snyder wrote ATLAS experiences, <https://vipclubmn.org/Articles/HeWasThere.pdf>.

“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, the existence of the ATLAS application was classified into the late 60s.



Picture 1. Futurist Earl Josephs at the 1101 console. Picture 2. Cover of a 1950s advertising booklet.

¹ Images from Sperry’s 1986 booklet, [ERA, The Wellspring of Minnesota’s Computer Industry](#).

Established in 1980

The 1100 ‘design’ history of technologies is in a 1990 paper by retired Unisys Fellow Richard ‘Dick’ Petschauer, <http://vipclubmn.org/Articles/HISTORY1100series.pdf>.

ATLAS type 1101 began the 1100 series of commercial computers sequenced in this table (left) as well as many Defense-Industry computers (right).

<u>Commercial System</u> <u>Type No.</u>	<u>1st unit</u>	<u>last built</u>	<u>qty</u> ²		<u>Defense</u> <u>computers.</u>	<u>1st delivery,</u> <u>mo/yr.</u>
1101	1950	1953	3		ATLAS I	1950
1102	1952	1955	3			
1103	1953	1956	11		ATLAS II	1953
1104	1954	1959	10		AN/USQ-17	3/1958
1103A	1956	1959	19		CP-642	10/1960
1105	1957	1960	10		CP-642A	9/1961
1107	1962	1965	38		CP-642B	2/1963
1108	1965	1975	303		CP-823	1964
1106	1969	1976	338		NASA - 1230	7/1965
1110 & 1100/40	1972	1979	455		CP-901	9/1967
1100/10/20/30	1975	1980	359		CP-890	10/1967
1100/80	1976	1985	1121		CP-808	4/1969
1100/60	1979	1988	2863		UYK-7	9/1970
1100/70	1982	1987	77		AYK-10	9/1970
1100/90	1983	1990	1318		AF - UYK-11	10/1971
1100/90Dyad	1987	1988	28		UYK-15	12/1971
System 11	1984	1988	603		UYK-20	8/1973
2200/200	1986	1990	966		UYK-23	12/1973
1100/70 Dyad	1987	1988	28		UYK-43	10/1984
2200/400*	1988		901		UYK-44	6/1984
2200/600*	1988		438			
2200/100*	1989		131		UYQ-70 ³	7/1995

- Almost 10,000 commercial systems integrated at customer facilities.
- Starting with the CP-642, UNIVAC-Sperry-LMCO ruggedized computers are on 460+ US Navy ships plus in German and Australian shipboard systems.

² Build quantities extracted from papers donated to the VIP Club Legacy Committee. * Last build date after 1990.

³ S/N 8,000 was aboard the USS Minnesota SSN-783 submarine launched in 2015.

Established in 1980

- The CP-890 navigated US submarines under the polar ice.
- The AF UYK-11 Minuteman launch computers had over 5,000-hour MTBF.



Figure 2. Shadow boxes exhibit technologies [from model 1103 through the 2200 series](#) - Unisys Eagan

3.3 MORE THAN HARDWARE

Five books illustrated here also tell parts of the story; for example, ERA and Bill Norris are discussed in each book.

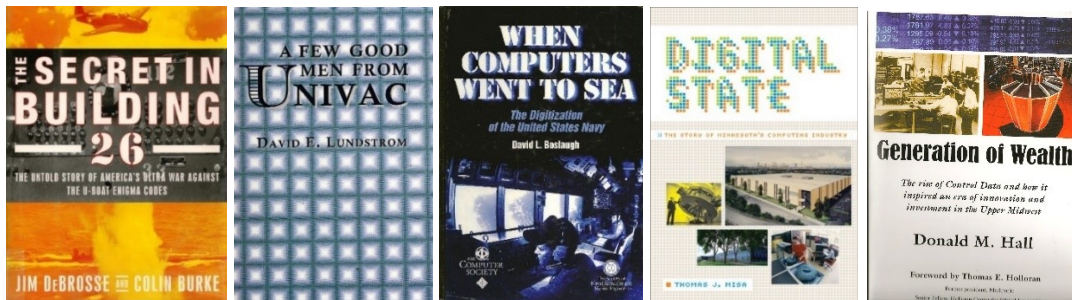


Figure 3. Colin Burke presented the Secret in Building-26 at a [2012 WWII symposium](#) at Ft. Snelling. Dave Lundstrom was a UNIVAC engineer who went to work for Control Data Corporation, thus his book title. Capt. David Boslaugh, USN ret. wrote about the evolution of [rugged computers and their peripherals](#). Dr. Thomas Misa was an advisor to the committee for a decade during which time he wrote about [computer developments](#) of several Minnesota companies. Don Hall was a CDC employee then a stock broker. Plus, Don was the instigator of and the principle doner for the Section 6 plaque story below.

Foremost throughout this Legacy are the people; many now enjoying retirees' camaraderie; others still working at Unisys and other high-tech companies in Minnesota and throughout the states; and sadly - so many who have passed away. Sperry's first female director, Millie Gignac, conceived the retirees club in 1979, <https://vipclubmn.org/history.html#Birth>.

3.4 SPIN OFF ORGANIZATIONS.

Technology managers and engineers by nature look for new opportunities. This led to many companies created by people from 'UNIVAC'. A genealogical tree of Minnesota's technology companies began with ERA in 1946! Most people don't realize that Control Data Corporation was the second Minnesota computer company led by William 'Bill' Norris. Cray was then a spin-off from CDC. Web page <https://vipclubmn.org/Spinoffs.html> lists spinoffs from ERA, Sperry, and Control Data Corporation.

3.5 LEGACY ANTHOLOGY WEB SITE

In 2006 the VIP Club committee began a 'Legacy Anthology' web site, inviting employees and retirees to submit their career summaries and product/project/program stories. To date over 600 have contributed to 60 topical chapters, <https://vipclubmn.org/sitemap.html#Legacy>.

Note that our Legacy Chapters as well as this paper and other stories are *Wikipedia like* in that we have embedded links to associated information. Because of evolution, an occasional link within our chapters and papers could have obsolesced.

- [People](#) - Over 200 career summaries from and/or about the people who have experienced parts of this Legacy and *The Story*.
- [Locations](#) - Not only the Twin Cities of Minnesota, but facilities throughout the U.S. and a few overseas sites: Marketing Offices, Technical Services Division (TSD), Canada, etc. Operations at some manufacturing sites have yet to be documented.
- [Engineered](#) - Our designs transition all electronic generations: vacuum tubes, transistors, integrated circuits, application specific integrated circuits, and embedded micro-processors. Chapters include Antenna Couplers, Field Service, Interfaces, Patents, Peripherals, Software, and Training.
- [Computers](#) - The world's first stored-program cryptanalysis computer shipped to a customer in October 1950, aerospace computers, Navy shipboard computers, airborne search computers, ..., embedded micro-processors - we've done all of them.
- [Systems](#) - Aerospace, Airborne, Air Traffic Control, Naval Tactical Data Systems, Marine Systems, Air Force, ASOC, Government, and Commercial since the File Computer systems in the 50s. This century, people might just call them apps.
- [Exhibits](#) - In January 2013 the Dakota County Historical Society's Lawshe Memorial Museum became the repository and displayer of artifacts collected by the committee since 2006. This chapter also provides information about other displays of ERA/UNIVAC/Sperry/Unisys equipment at museums throughout the United States.
- [Our Stories](#) - Since April 2007 we have been soliciting, editing, and posting stories as the 'Article for the Month'. Some are technology tidbits, some are committee status summaries, a few are duplication of other publications from other organizations used with permission, and some developed in response to questions posed by people who have browsed our site chapters. This chapter also lists a plethora of books, magazines, and slide shows that have ERA/UNIVAC/Sperry stories.
- [Contacts and Links](#) - Many web sites provide heritage related information. Also, we have provided links to several 'educational' sites for youth who want to investigate Science, Technology, Engineering, and Mathematics (STEM) careers.

Lowell was webmaster from 2006 through 2019; Jim Andrews has been the webmaster since 2020, – hosted on www.webhostinghub.com since 2011.

4 LAWSHE MEMORIAL MUSEUM

More defense industry computer artifacts than any other museum in the world!

In 2011 the Dakota County Historical Society (DCHS) 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, and a State of Minnesota Legacy Grant; VIP Club volunteers cataloged the 1,000+ artifacts and began exhibit planning.



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. Desk set from [Don Weidenbach](#), an engineer, ERA 1946 – Sperry/UNIVAC '76.

A second MN Legacy Grant and VIP Club volunteers then developed [16 educational posters](#). This 2nd grant and equipment from LMCO also facilitated five workstations at the museum. Volunteers are using workstations to catalogue and identify over 20,000 photos of the Legacy collection, integrating the information into the museum's artifact collection database.



Figure 4. Current DCHS Executive Director Matt Carter is seeking grants to develop informational posters for many other artifacts waiting exhibit positioning. Snapshot by VIP Club Volunteer Extraordinaire Keith Myhre. His volunteer co-workers Les and Bob are on the left. BTW, this great room floor is a map of Dakota County.

5 ORAL INTERVIEWS

5.1 CHARLES BABBAGE INSTITUTE

CBI has over 100 oral interviews available for researchers. ERA founder John Parker's interview provided a lot of the data/information for John Lindley's unpublished manuscript, <https://vipclubmn.org/Documents/Born%20of%20a%20Wartime%20Necessity.Complete%20Ms.Revised.11.14.16.pdf>. Jack Hill's daughter, Bonnie Hill, provided the Charles Babbage Institute interview information (<https://vipclubmn.org/PeopleInterview.html#Hill>) while responding to a [Curt Brown Minneapolis Star Tribune article printed January 10th, 2021](#). That article focused on Don Weidenbach whose proudest memory is the Speed Tally computer. Some of the CBI data is etched on a U of MN's Scholars' Walk at the Computer Science and Engineering building, i.e. [Rollie Arndt's](#) NIKE-X design diagram.

5.2 THE VIP CLUB

In the fall of 2007 John Westergren visited the First Friday luncheon with a video camera (also referred to as the [Original Geek Squad](#).) John video-taped 13 of the people there. Thanks to Keith Myhre who was able to convert the files to individual .mpeg files. It is sad that all of them have passed away since the recordings. Links to the videos are available at: <https://vipclubmn.org/PeopleInterview.html#OldTimers>: William 'Bill' Butler, James 'Jim' Wright, Gerald 'Jerry' Williams, Edwin 'Ed' Nelson, Jack Ross, Bernard 'Bernie' Jansen, Robert 'Bob' Wesslund, Leo Bock, Alden Allen, Phil Phipps, Charles 'Chuck' Homan, Gale Jallen, and Warren Burrell. Plus <https://vipclubmn.org/PeopleInterview.html>, chapter 22, has interview bits from Manny Block, Roy Valentini, [Jim Rapinac](#), [Fred Hargesheimer](#), [Marc Shoquist](#), and [Larry Debelak](#).

5.3 MINNESOTA HISTORICAL SOCIETY

In 2019 Ryan Barland at the Minnesota Historical Society had a two-year oral-history-grant to interview and capture computer history before life stories were lost forever. Keith Myhre was the VIP Club's point person. The interviews were to be transcribed and reviewed by interviewees prior to finalization. The audio tapes and transcripts would then go into the Minnesota History Center's collection for future use.

Interviews completed by January 2020 were: • David Andersen • Keith Behnke • Lowell Benson • Rich Daly • Bill Geiger • Carl Johnson • Don Mager • Keith Myhre • Harvey Taipale • Earl Vraa • John Westergren • Don Weidenbach.

We've received three completed transcripts, formatted and posted as Our Stories Articles:

- Earl Vraa – <https://vipclubmn.org/Articles/Vraa-EarlBio.pdf>.
- Keith Myhre – <https://vipclubmn.org/Articles/KeithMyhreOralInterview.pdf>
- Lowell Benson – <https://vipclubmn.org/Articles/Transcript-LowellBenson.pdf>

Established in 1980

Others in Mr. Barland's 2020 queue were: • Jim Andrews • Paul Hove • Frank King • Fred Vihovde. Ryan noted that he was able to interview Rich Daly in November 2019, "It was short, but I really enjoyed listening to him discuss his early life."

Mr. Barland was working on transcribing the interviews for sending to the narrators until mid-March 2020, at which time COVID struck, and he went on maternity leave! The project was paused, and never resumed.

5.4 RAMSEY COUNTY HISTORICAL SOCIETY

The [Club's Enews2411](#) issue contains this article, written for our newsletter by Barbara Sommers and Carson Tomony. "Barbara is conducting ERA history interviews for the Ramsey County Historical Society. In early 2024, RCHS received a grant from the Minnesota Historical and Cultural Heritage Grants program—also known as a Legacy Grant—for an oral history project documenting the history of Engineering Research Associates in St. Paul, MN.

ERA, a very early computer company, was formed in 1946 by World War II codebreakers. It became a leader in the nation's developing computer industry, building some of the fastest computers in the world. The company lasted for six years before being sold to Remington Rand in 1952 with the hopes that a larger company could better support its growing research and development needs. Drawing on the name of the computers it was selling, Remington Rand formed the UNIVAC Division in the company and incorporated ERA into the division. Through the years, UNIVAC was sold and merged several more times, beginning when Remington Rand merged with Sperry Corporation in 1955, then again when the company became Sperry UNIVAC in 1973, when it became Sperry in 1979, and when Unisys was formed through the merger of Sperry and Burroughs in 1986. In the meantime, Control Data Corporation (CDC) spun off from the company to form its own company in 1957, and Cray Research, Inc. spun off from CDC in 1972. Data on the VIP website documents these changes.

The purpose of this RCHS project is to use oral history interviews to help document the legacy of ERA, Inc. and its extant subsidiaries in the early United States computer technology industry. The basic or guiding question for this project is: What impact did the ERA location in Minnesota have on the development of major state computer-based technology industries, including medical technology industries? What is the ERA legacy?

Narrators (interviewees) for this project have information about the early years of the computer industry in Minnesota and about the companies that continued making and selling computers throughout the history of sales and mergers. Two project narrators began their careers at ERA, and others were employed during the early years of the follow-up companies. Their information is helping add insight into the beginning and growth of the computer industry in Minnesota.

Project narrators (interviewees) are: ➤ **Lowell Benson** – worked at the companies from 1960-1994 and then at the University of Minnesota until 2001. ➤ **Marilyn Chiat** – her husband, Harvey, worked at Mechanical Division at General Mills when it was affiliated with Bendix and then at the companies from 1960 to 1997. ➤ **Sandra Hollenhorst** – worked with start-up medical device industries. ➤ **David McCauley** – employee of the companies in the early 1960s. ➤ **Curt Nelson** – employee of ERA and the follow-up companies from 1952 to 1981. ➤ **John Rollwagen** – CEO of Cray Research, Inc. ➤ **Harvey Taipale** – worked at the companies from 1966 to 2007. ➤ **Paul Wagschal** – worked at the companies for several decades beginning in 1968. ➤ **Manuel “Manny” Villafaña** – founder of medical technology companies in need of computer services from 1971 through the present. ➤ **Jeffrey Yost**, PhD – with the Charles Babbage Institute at the U of MN since 1998, its director since 2018; and a faculty member in the Program in the History of Science, Technology, and Medicine, U of MN, Mpls, since 2010 and a research professor since 2019. *Barb Sommer and Carson Tomony*”

After the above article was written Ms. Sommer informed me that she had interviewed **Harold Grandprey**, who started at ERA in 1951, and Arnold Cohen’s daughter. When the project is completed in November 2024, the files will be held in the RCHS collections.

5.5 FREE LANCE

John Lindley sent me (Lowell) a copy of a Rich Daly interview, it is presently in my pending file until determination as to whether to link and post it in chapter 22, or as an Our Stories article. Stay tuned for a decision in 2025.

6 ERA COMEMERATION PLAQUE

The commemoration ceremony was held on June 15, 2023, at 1902 Minnehaha Ave. in St. Paul, MN – the original ERA facility. RCHS President Chad Roberts (left) and Emcee Don Hall did the plaque unveiling. The plaque focus is that *technology came to rival agriculture and mining as a leading Minnesota industry.*



The VIP Club appreciates the Ramsey County Historical Society commemorating that **ERA** meant more to Minnesota than just computers!

6.1 PLAQUE WORDING

You are facing the original Engineering Research Associates building.

Engineering Research Associates (ERA) was founded at the end of World War II by a group of Navy codebreakers whose top-secret work helped launch the world’s computer industry.

Established in 1980

Employees produced what is considered the first general-purpose computer with random-access memory, a forerunner to commercial computers today.

Personnel from ERA and its successors helped launch over 100 local firms that developed and built computer hardware and software products and related components. These included Sperry Rand (UNIVAC Division), Control Data Corp. and Cray Research. The technology developed by ERA and its successors, and their financial success, directly influenced the evolving medical device industry that came to include Medtronic, St. Jude Medical, and Cardiac Pacemakers.

From this plant, an enormous contribution was made to human welfare throughout the world, and the benefits to the local economy are almost beyond measure. Technology came to rival agriculture and mining as a leading industry in the state.

This plaque, installed in 2023, recognizes the historic importance of ERA and its successor companies.

Special thanks to: Donald Hall (author), Dave Beal (journalist), Jay Pfaender (historian), Capital Partners (building manager), Chad Roberts (historian) and the Ramsey County Historical Society.⁴

Learn More: WWW.RCHS.Com

6.2 PLAQUE LOCATION

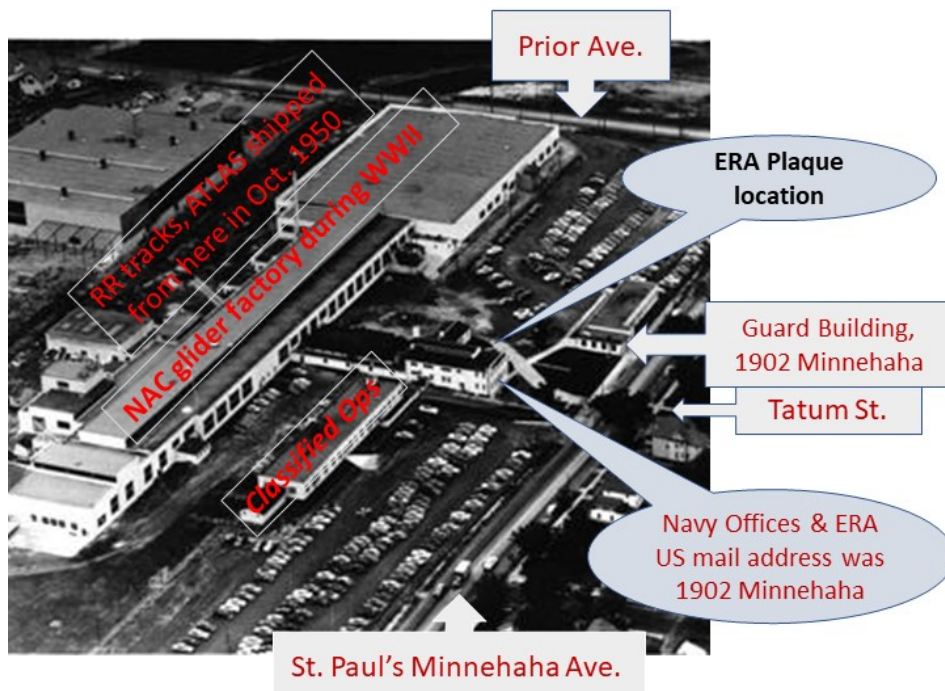


Figure 5. Image from 1986 ERA 40th anniversary booklet, captioning by LABenson.

⁴ Although Lowell was part of the planning committee, he declined having his name listed on the plaque.

6.3 ERA MILESTONES TALK

The VIP Club's Mr. Benson summarized ERA's legacy timeline at the plaque unveiling.

1952 –Remington Rand bought ERA, merging it with Eckert Mauchly Computer Corporation in Pennsylvania to form Remington Rand UNIVAC.

About then engineering manager John M. Coombs left ERA for IBM. A year later IBM announced their model 650 computer; the 650 designs included non-volatile drum memory technology that came from a very loose ERA/IBM patent agreement.

Possibly the first ex-ERA engineer to aid another company's success!

1958 – UNIVAC delivered an ERA/UNIVAC model 1103 to the U of MN to start their digital computer center in the Experimental Engineering building.

So, an ERA designed machine helped start the University's Computer Science curricula.

1961 – Remington Rand UNIVAC (RRU) divided its computer operations into two financial groups: **Defense Systems Division (DSD)** based in St. Paul while the Roseville commercial operations would report directly to Blue Bell, PA. This separation was to avoid some governmental contract accounting and auditing requirements!

1986 – Sperry put an ERA plaque here that disappeared in the 90s. Burroughs bought Sperry to form Unisys – the merging of two companies had personnel in 28 Twin Cities' locations. The combined companies had ~120,000 employees worldwide – about 13,000 in the Twin Cities. The Burroughs offices came together in Eagan, a new building near the DSD facilities.

2011 – The Dakota County Historical Society (DCHS) agreed to house a permanent exhibit of the ERA-UNIVAC-Sperry-Unisys-LMCO artifacts at their Lawshe Memorial Museum in S St. Paul; thanks to then DCHS Executive Director Chad Roberts.

2019 –Twin Cities Public Television (TPT) premiered an hour-long documentary *Solid State: Minnesota's High-Tech History*. The Minnesota High-Tech Association was a principal sponsor, producer was Kevin Dragseth. The narrator was Dr. Tom Misa, the second Director of the **Charles Babbage Institute** holding the ERA land grant chair. TPT interviewed 27 people; two of whom had worked for ERA – two others are speaking here today!"

Other speakers: Don Hall, Opening welcome and brief history of ERA in St. Paul. • Chad Roberts unveiled and read the Plaque, Ramsey County Historical Society President & CEO. • Dean Laurance recalls the work environment (engineer from UNIVAC & CDC.) • James McGuire for Norb Berg recalled Bill Norris and Control Data Corporation. • John Rollwagen reminisced about Seymour Cray and Cray Research. • Manny Villafana, the evolution to medical devices (founder of Cardiac Pacemakers, St. Jude Medical, and six others.)

6.4 NOTABLE EVENT ATTENDEES

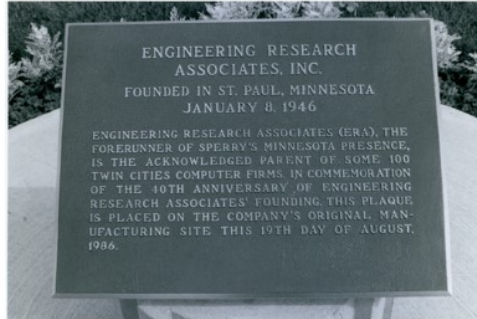
- Dragseth, Kevin – Producer at Twin Cities Public Television who led development of the 2019 documentary, <https://vipclubmn.org/Articles/TPTclips.pdf>.
- Hill, Bonnie – daughter of Jack Hill; who was on the 1950 ATLAS delivery team.
- Lefebvre, Charles ‘Chuck’ – Unisys Vice President and head of the Unisys Eagan facility, the last ERA direct lineage facility in the Twin Cities.
- Leichtweis, Capt. Donald, USN ret. – Was head of the Navy’s on-site personnel at the 1902 Minnehaha leased Sperry facility in the 80s.
- Lenfestey, James P. - Author of A [Gaggle of Geeks](#) originally published in the Minnesota Monthly, July 2005.
- Miller, John – John was a Sperry employee who went on to form another company, reference the December Our Stories - <https://vipclubmn.org/OurStories.html#2021>
- Norris, Roger – son of ERA founder Bill Norris.
- Tollefson, Jeff – President of MN Tech, a consortium of MN companies that had sponsored a Twin Cities Public Television documentary based on Dr. Tom Misa’s [Digital State](#) book.

6.5 RCHS EVENT SNAPSHOTS



Figure 6. The VIP Club’s tabletop display was configured for this event with seven of the 16 informational posters from the Lawshe Memorial Museum. The Wellspring chart across the top is from the Club’s 2008 sesquicentennial exhibits, <https://vipclubmn.org/Articles/It'sAWrap.pdf>.

Established in 1980

ERA Plaque – lost in the 90s.Sperry Recognized 40th Anniversary of ERA's Founding.ERA poster images from the Lawshe Memorial Museum, courtesy of VIP Club volunteer archivist Keith Myhre. <https://vipclubmn.org/Exhibits.html#Lawshe>

Pioneer Press, 8/20/86 reported the unveiling event.

©ERAplaque86.pptx by LABenson



Rolland Anderson, facilities management; Bill Geiger, DSD VP & General Mgr; Bob McDonald, Sperry President; and Jack Nicols, public relations.

Figure 7. We searched for this plaque to no avail, <https://vipclubmn.org/Articles/40-Yr%20Plaque.pdf>.

Club members at the 2023 event were Bob Pagac, Dick Lundgren, Frank King, Harvey Taipale, Jim Andrews, Keith Myhre, Les Flugum, Les Nelson, Mary Beth Ruhland, and Steve Koltes.

7 EPILOGUE

Three sub-sections finish this *Telling the Story* status report: 1) committee achievements, 2) an interesting tidbit and 3) Not Done Yet! Some of this paper's section 6 was in the plaque event [report posted in July 2023](#), which included many more event snapshots. Special thanks to Keith Myhre for making editorial fixes to this paper.

7.1 COMMITTEE ACHIEVEMENTS

Volunteers have contributed hundreds and thousands of hours to make the achievements listed hereunder happen! A few have been awarded the Club's *Volunteer Extraordinaire* certificate in recognition of their individual efforts: 2015, Keith Myhre; 2016, Dick Lundgren; 2017, Don Weidenbach, 2018, Tom Turba⁵; 2019, Pat Myhre⁵; 2022, Lowell Benson; 2023, John Westergren; and 2024, Bob Pagac and Les Nelson. These are listed with other club Milestones at <https://vipclubmn.org/history.html#Milestones>.

1. Over 600 people have written legacy articles; authors and article contributors are listed in <http://vipclubmn.org/PeopleIdx.html#Writers>.
2. Twin Cities Public Television (TPT) in partnership with the MN High Tech Association produced a '[Solid State: Minnesota's High-tech History](#)' documentary. It was filmed at TPT studios, the museum, a VIP Club picnic, and a few other MN sites. Narrated by Dr. Tom Misa, it included interviews with eight Legacy Committee members.

⁵ Award presented posthumously to his and her surviving spouse.

Established in 1980

3. We contributed to some history videos by the Computer History Archives Project, <https://www.youtube.com/playlist?list=PLsMFdOlQPga49bN2aZlOu6SbZj57uZpZl>.

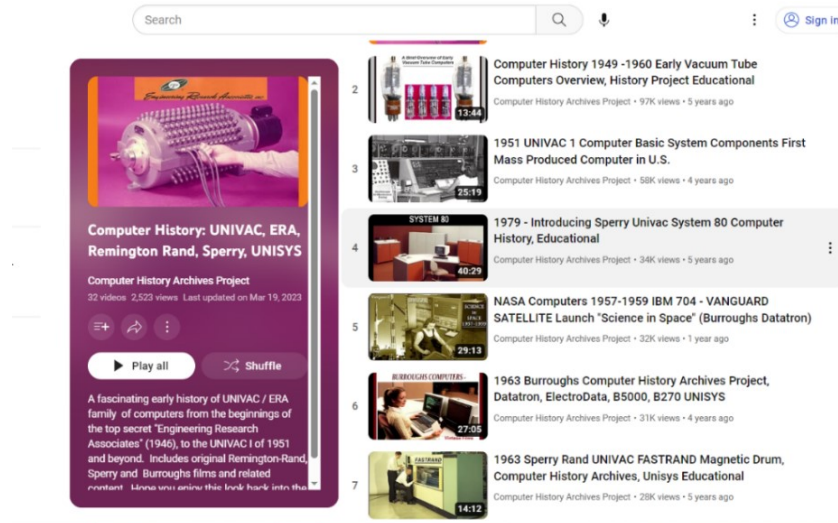


Figure 8. You-Tube Play-List Screen shot shows ERA Drum as the 1st of 33 ERA to Unisys history videos. Thanks to CHAP director Mark Greenia.

4. Developed posters and presentations for the Minnesota Sesquicentennial celebration in 2008, [It's A Wrap](#).
5. Posted 200+ career summaries listed in <http://vipclubmn.org/People.html#bios>. Our Minnesota corporate name history is at <http://vipclubmn.org/lmcolegacy.html#Names>.
6. Identified several museums with some ERA/UNIVAC/Unisys artifact displays, linked from <https://vipclubmn.org/Exhibits.html#Others>.
7. Posted 322 Articles for the month (Our Stopries) since April 2007.

7.2 SIGNIFICANT TIDBIT

A recent review of a declassified NSA document showed that John Coombs, an MIT graduate student, was employed at the Naval Machine Computing Laboratory during WWII. In our legacy anthology is <https://vipclubmn.org/Articles/DrumPrototypeDesign.pdf>; a Reprint of a paper **STORAGE OF NUMBERS ON MAGNETIC TAPE [PAGE 201] - J. M. COOMBS - Engineering Research Associates**, published in the Proceedings of the National Electronics Conference Vol. 3, 1947. We also have [XA-19742](#), a Technical Memorandum, 12 December 1950 that lists J.M. Coombs as Task 13 Personnel. Also on that list was Warren Burrell.

Warren Burrell, <https://vipclubmn.org/People1.html#Burrell>, wrote "IBM, I understood, was very favorably impressed with the ERA Drum Storage Technology and therefore entered into a no revenue overall patent exchange. An effort to design the IBM 604 with an ERA Drum was not satisfactory. We three (George Hardenberg, Arnold Cohen, and Warren Burrell) were to prepare a paper design employing punched cards and drum. I had fun learning 'excess three binary arithmetic' from George. John Coombs was persuaded to join IBM.

Established in 1980

His early ERA patents included selective alteration on drum memory. Our paper designs were circulated among the six or seven IBM laboratories. Some questions came back but no details as to application until IBM announced the 650 and it became the first large scale production computer.”

This and George Champine’s unpublished Sperry-Univac chapter, (section 3.3 on page 10) <https://vipclubmn.org/Documents/Sperry%20UNIVAC%20-%20The%20First%20Computer%20Company%20-%20Chapter%203%20ERA%20by%20George%20Champine%20-%201979.pdf> justify why we can write that ERA was the world’s first computer company! LAB

7.3 NOT DONE YET!

The Legacy Committee members continue to catalogue donated artifacts at the Lawshe Memorial Museum, volunteers are there Tuesday mornings. The museum has a dedicated room set up with three workstations for processing donated items. We need a ‘scripting expert’ to generate code, putting the artifact database on-line for researchers.

A January 14, 2025, WWII Roundtable presentation – *From Gliders to Computers* at the MHS facility in St. Paul – host is Col. Don Patton, USA Ret. Script will be the Feb. ’25 Our Stories.

During 2025 Unisys will be moving operations from Eagan to Woodbury. As part of that move the committee will assist in transferring shadow boxes from Unisys to the Ramsey County Historical Society, <https://vipclubmn.org/Articles/ERA2unisysWeb.pdf>.

Contributions to the anthology Locations’ chapters are needed for out-of-state manufacturing locations, i.e. Pueblo CO and Clearwater FL.

At our November ’24 Old Timers, Richard Erdrich gave us a disc with many stories from his 47-year career with the companies. We expect to format and post these during the early months of 2025. Dick is in the TPT documentary, look for the guy with silver haired crewcut.

Plan celebrations: in 2025 will be the VIP Club’s 45th anniversary and our Legacy Quest’s 20th anniversary. In 2026 will be 80 years since ERA opened their doors.

Hey readers, what have I missed? OR, if you see factual errors anywhere in our Legacy Anthology – [let us know](#) so that we can continue the same quality level as the ERA/UNIVAC/Sperry/LMCO/Unisys systems.

“75-yrs since ERA pushed the power button to ignite MN’s computer age”

Paraphrased from a Curt Brown email about his January 2021

[Minneapolis Star Tribune article](#).

“Life is the time, space continuum of human interactions.” LAB
Lowell A. Benson, BEE 1966, University of Minnesota.