

IEEE Milestone Dedication: Medical Informatics El Camino Hospital, May 14, 2026

This transcript has been lightly edited for clarity, brevity and accuracy. Accordingly the words in this transcript may be different than those in the recording

00:03, Welcome and Introductions

Dan Woods, Chief Executive Officer, El Camino Health

Thank you, Deb. It's so good to see everybody out here. Thanks so much for making the trip.

I would like to start off by recognizing a few distinguished guests, and I would begin with the El Camino Health Board: Honorable Julia Miller, Dr. Peter Fung, Wayne Daiguchi. And I did see our incoming chair, Dr. Jack Poe. He thought he would sneak away on us, but he's back there.

We have staff from Congressman Sam Liccardo's office, as well as, in person, Supervisor Margaret Abe-Koga, and staff from Otto Lee's office — I believe there he is.

We have so many people here to recognize. Jill Gostin, the IEEE President-Elect — Russell Branzell — actually traveled quite a ways from Atlanta, Georgia — Russ Branzell, the CEO of CHIME. Mark Pasquale, retired Vice President and General Manager of Lockheed Martin Space, who is also very, very busy with all these other activities going on.

And so many others from Lockheed, as well as members of our board from the El Camino Health Foundation, who help support and put this on. It is really remarkable with regards to everyone being here and having traveled to celebrate this momentous occasion. So it is truly my privilege to welcome you to El Camino Health and mark the dedication of the IEEE Milestone for their pioneering Medical Information System.

Today we are not only honoring a technological achievement, but also celebrating the spirit of community, partnership, and a vision that made it all possible.

El Camino Health has always believed that our greatest strength lies with our people, and it truly has shaped our purpose. This milestone is a testament to what can be accomplished when individuals from diverse backgrounds — clinicians, engineers, administrators, and community leaders — come together with a common goal: to serve our patients and to advance the quality of care.

What makes this recognition really, really meaningful is the way that it reflects our ongoing commitment to collaboration. The Medical Information System was not simply a product of its time. It was the result of open minds, mutual respect, and the willingness to learn from one another — values that I hope we can continue to carry on. These values have

shaped our organization from the beginning and continue to guide us as we face new challenges each and every day at El Camino Health.

I want to take a moment just to recognize many individuals whose dedication and perseverance brought this vision to life. Some are here with us today, while others may be with us in spirit and looking down upon us, but the families of these individuals are represented here. These individuals have left a lasting impression on El Camino Health and in the broader field of medicine.

Our partnership — El Camino's partnership with Lockheed — is a testament of innovation, and being kind of at the heart of Silicon Valley, where this innovation is a continuous journey to expand what we have today and beyond.

I kind of think back to the essence of a journey that was captured by a young man. I'll tell a story. At the age of fifteen, he had a question that he kept throughout his entire life, and the question was: Isn't there a better way? And that young man — it kind of resonates with you, doesn't it? So that young man had that question. It guided him throughout his life. His name is Thomas Fogarty, and that question would not only be the focal point of his life of innovation, but I would argue that it is woven into the very DNA of El Camino Health.

It's also the question that drove engineers and clinicians to build the Medical Information System we honor today — an ambitious attempt, with a light pen, to harness technology in service of patients. And it is the question that guided El Camino Health for decades through every partnership, through every breakthrough, and every patient we have had the privilege to serve.

I'm looking for another inventor — Dr. Fred St. Goar. There he is, right over there, a truly remarkable breakthrough inventor of his kind.

But as we celebrate this milestone today, let us remember that innovation is not just about technology. It's about people. It's about people working together to solve problems, improve lives, and create a legacy of excellence. The story is, above all, a story of hope, determination, and a belief that we can always do better for the patients we serve.

Thank you for being part of this celebration and for your continued support. We look forward to the next chapter of El Camino Health's innovation journey.

And before we move on, we now have a special video from Congressman Sam Liccardo, who is in Washington doing Washington, DC things. And after this video, we will be followed by Congressman Liccardo's staff, as well as Supervisor Margaret Abe-Koga, and staff from Otto Lee. Please roll the tape.

07:04, Significance of Medical Information Systems

Sam Liccardo, Congressman, U.S. House of Representatives

Hi, I'm Sam Liccardo, and it's my honor to represent Silicon Valley and much of the peninsula in Congress. I am actually in Washington, DC today working, so I'm sorry I

cannot be there with all of you. But it is certainly part of my job to recognize the great innovation of our valley. And of course, it goes back many decades. And today, of course, we celebrate one of those great milestones with this milestone award.

I want to thank the IEEE for their work in driving innovations like this every single day, and for the recognition of El Camino Health for their innovation and partnership with Lockheed Martin that made this very important step in medical informatics come to life. It was in 1971 that we saw really the advent of electronic medical records. Of course, we know that thousands of folks, certainly at El Camino Health, have benefited in terms of better outcomes as a result, and millions throughout our country and billions throughout our world as a result of these developments.

And the development was not merely in ensuring that these records could be made available electronically, but in the human factors work and the user experience, recognizing that doctors in the '60s and '70s were probably not going to take to a keyboard, and so a light pen was used. These kinds of insights, of course, are what drive successful innovation in a human context.

So I really want to thank the folks who were deeply engaged in this effort: Tom Gardner and Brian Berg with the IEEE; Rich Clewett, who was an advisor; Mary Snitch with Lockheed Martin. Thank you all for your pioneering efforts. We are all better for it, and I look forward to doing all that we can back in Congress to help lift up your great work.

08:57, Presentation of Congressional Resolution

Justin Jeong, Congressional Staff

Hi, everybody. My name is Justin. I'm Congressman Luccardo's Director of Constituent Services. Thank you so much for being here. And I could not have put it any better than my boss, so I'm just not going to.

But with me, I brought some presents for folks here. So we have a congressional resolution for El Camino, the IEEE, and Lockheed Martin. So Mark, Jill, Dan, if you could come up here.

09:54, Presentation of County Certificates of Commendation

Margaret Abe-Koga, Santa Clara County Supervisor, District 5

Thank you. I'm Margaret Abe-Koga. I'm the County Supervisor of Santa Clara County for District Five, which El Camino is a part of. I have nine out of the fifteen cities in Santa Clara County in my district, so I have the most cities. But some of you may know me — I was a Mountain View council member and mayor before this. And so I love all of my cities equally, but it's always great to be home.

I'm really grateful to El Camino Health and all of the incredible contributions and taking care of our community. And I'm going to speak a little later too, so I'm just going to save my words for later.

I have Daniel Cao here from our board president Otto Lee's office, and we wanted to also present some certificates of commendation. Ours are a little bit more modest because, as you know, we have a big budget deficit. But we have one for El Camino Health and also Lockheed Martin and the IEEE. So we would love to present these to you.

12:18, Overview of Lockheed's MIS

Brian Berg, IEEE Section History Committee Chair

Happy to be with you all today. This is a pretty cool event. I just want to thank El Camino — the staff here has been so great to work with — and Lockheed as well. I have worked on a number of these, but I don't always have this much support, so I really want to thank you very much.

Welcome to this historical celebration. My name is Brian Berg. I've been on the IEEE History Committee for a while and have been involved with a lot of these milestones. We welcome you to this hybrid event, because remember, we have a lot of people watching online as well right now, and this will also be recorded for people to view later. Everybody who is attending will receive a link for that.

Let's go back in time. Back in 1965, El Camino Hospital was a young community hospital. They actually were what you could call a startup company. You know, you might not think about that, but if you think closely about it, what is so different about El Camino Hospital compared to what was going on? And Lockheed, a local defense contractor, was looking to diversify, and they saw the health industry as a prime candidate for that.

So there was a partnership that happened between El Camino and Lockheed. From 1965 to 1974, they created this Medical Information System that we have been talking about. So it computerized healthcare for the entire hospital and allowed for direct physician input for accuracy. There is all sorts of talk about physicians not wanting to use keyboards, but they could use this light pen so they could avoid that keyboard, so that they actually were willing to — after a little bit of pushing — willing to actually work with this system. And it was very successful, so we celebrate that today.

So you will hear about MIS, and you will see a little slideshow before the event here that you saw, and also a video that will kind of recap everything. So we are honoring El Camino Hospital and the small Lockheed team, as well as the doctors and nurses and government officials who worked on this system and its impact on society.

We have the keynote speakers. We have the IEEE President-Elect who will be speaking, and I will also be talking again about the Milestone Program in particular and also the impact on the healthcare industry, which you will be hearing throughout this presentation. We have a plaque unveiling and reception out in the courtyard.

So back in 1965, a fellow named Peter Drucker made a statement that is really quite interesting. He said,

"We have never in human history built anything as complex as the modern hospital."

Now, if you think about that, what is a hospital? It's a bunch of doctors and nurses, it's a bunch of specialists, it's a lot of life-or-death situations, potentially. So what is more valuable than life-and-death situations? Making sure that you deal with that appropriately. So this is what was being dealt with with this system.

So back in the sixties and early seventies, Medicare went into effect in 1966. Talk about timing. I mean, you talk about inputting data — gee whiz, you are going to do that with pen and paper, writing that on a piece of paper? It is not going to happen. It is not going to be accurate. That is the whole thing. We wanted accuracy. Doctors' handwriting was, you know, legendarily indecipherable. People got wrong medications because of it, all these things. So those are the kinds of situations that we are trying to address with this system.

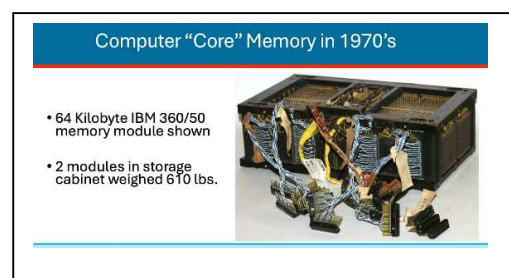
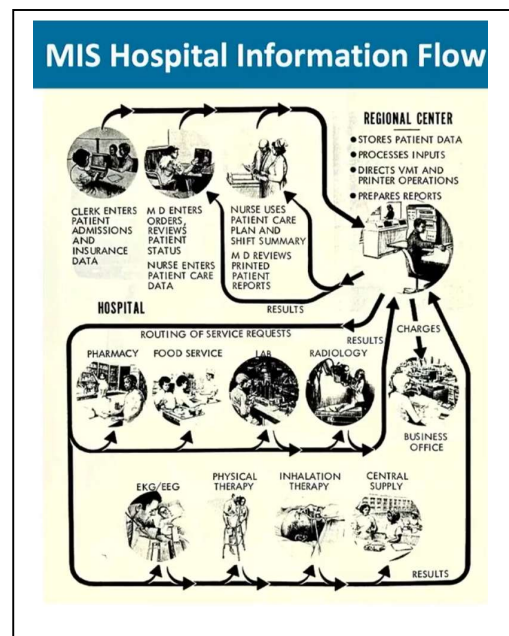
Here is a flowchart that shows the complexities of this — or at least gives you an overview of the complexities of all the different ways that different parts of the system were interacting. So a nurse would do something, and a physician would do something, and something would happen in the operating room, and suddenly they rush to the emergency room. All sorts of situations could happen. So this was a system that was helping to deal with this and making sure that things would happen correctly.

Now, what computers did we have at that time? We had IBM mainframes and other computers too, but this system was built on an IBM mainframe. Here is 64 kilobytes of memory.

This weighed 610 pounds. Think of your cell phone. Think of seven orders of magnitude more storage than that in the palm of your hand. Is that incredible? So that is what has changed over the past fifty-plus years.

How do you put input in? There is all this talk about this light pen.

So there was a mouse being developed at SRI over on the Stanford campus in Menlo Park, but that was not available. The mouse was not available at that time, but the light pen was available, and that came out of the military. This was actually invented at MIT in 1951, and then it was used by the system called the SAGE system, which was protecting us during the Cold War and the threat of incoming Soviet missiles. This was used by people all around



the country, all around North America, protecting us. So people at Lockheed knew about this light pen, and that is how it got integrated into the system.

We will now have a short video about this time period.

17:17, MIS One Promotional Film (circa 1973)

[Transcription of video]

“MIS I, the first computerized Medical Information System designed by health professionals for health professionals.

From the moment of admission, MIS I reduces paperwork, ensures accuracy, and enhances patient care. Manual charting, however, is eliminated as the nurse enters her observations directly into a Video Matrix Terminal at the nursing station. Dr. Robert Constantino, following his initial examination of Mr. Ortega and throughout his patient stay, also will communicate his medical orders directly through the Video Matrix Terminal, eliminating problems of illegibility and transcribing errors.

In the pharmacy, labels for medications are printed along with copies of the prescription. With the pharmacist released from the typewriter, his time is more fully spent in professional support of the medical staff. Each patient's complete medication history is kept in the system and may be displayed on the Video Matrix Terminal or printed at any time the pharmacist or physician wishes to check for drug incompatibilities.

All charges are captured automatically, either at the time an order is written or when the service is performed. Using MIS I, lost charges become a thing of the past. As soon as the stat test is completed, it is entered into the system by the technologist.

Routine procedures are scheduled, performed, and reported in groups by test type. No lost requisitions. No misplaced, delayed, or misfiled reports.

A patient care plan is produced by MIS I for each patient at the start of each shift, eliminating manual maintenance of a cardex or rand and assignment sheets.

The nursing staff can now focus on direct patient care rather than paperwork. From admission to discharge, MIS I reduces paperwork, speeds orders, documents care, maintains a complete and legible medical record, improves the utilization of personnel, and makes more time available to the professional for direct patient care. MIS I, designed by health professionals.

Presented by Technicon Information Systems Corporation with the cooperation of El Camino Hospital.”

Don't you love those old videos? Here is a little recap of our story today.

- 1965, Lockheed decided to enter the medical field.

- 1966, they made a presentation to the Santa Clara County Board of Supervisors.
- 1971, the Lockheed team was acquired by Technicon, and
- 1974, doctors and nurses voted to commit to the MIS system. You will see later that the nurses were the overwhelming ones who really wanted this. But the doctors went along, and it worked really well.
- 1993, it was used by over two hundred hospitals. In
- 2005, the system was retired

So here is a little overview of what happened. You see in 1965 on the left, Lockheed begins the effort. In 2015, sixty years later, El Camino adopts the Epic system. So we will be talking about some of the key things that happened in this whole timeframe. Thanks very much.

Key Times in Our Story Today

- 1965: Lockheed decides to enter the medical field
- 1966: Presentation to Sta. Clara County Bd. of Supervisors
- 1971: Lockheed team acquired by Technicon Corp.
- 1974: **Doctors/nurses vote to commit to the MIS system**
- by 1993: MIS used by over 200 hospitals
- 2005: MIS system retired at El Camino Hospital

21:09, IEEE Background

Jill I. Gostin, 2026 IEEE President-Elect

Thank you. You know, IEEE has over 250 milestones. This is my first one that I have been to, so I am going to remember this one forever. I am very happy to be here with you. And I am also grateful to the Santa Clara Valley IEEE Section for proposing and sponsoring this milestone, and also to El Camino Hospital, El Camino Health, for hosting us today. But I am honored to join you in celebrating an achievement that served as a turning point in how technology supports human health, and reminds us why engineering history matters. This system was more than a technical breakthrough. It was a promise that engineering could meaningfully improve our well-being.

For more than a hundred and forty years, IEEE has advanced technologies, and every technological progress has had IEEE involvement in it, contributing research, standards, and the shared technical knowledge that underpins modern engineering. With that history comes a responsibility to preserve the insights and the breakthroughs that shape the fields, and to ensure they remain accessible to those building what is going to come next.

By maintaining a rigorous historical record, IEEE helps technologists understand where key innovations started, how ideas evolved, and how engineering decisions shape the systems we rely on today.

In doing so, we empower today's professionals and support the next generation of innovators.

IEEE's roots reach back to the late nineteenth century, when engineers were first mastering electrical power, long-distance communications, and the practical systems like telegraphs, telephones, and lighting that defined modern infrastructure.

In 1884, a group of these practitioners, including Thomas Edison and Alexander Graham Bell, formed a professional community committed to applying their expertise for the benefit of society. That community is known today as IEEE.

Since then, IEEE has documented and advanced fields that grew from those early breakthroughs and that became the disciplines that now shape global technology. This history shows how scientific understanding drives new technologies and how those technologies open new frontiers for scientific inquiry.

IEEE is a public charity with the purpose of our work being to engage in scientific and educational activities. Our activities are tied to our mission of advancing technology for the benefit of humanity. That is the key: for the benefit of humanity. This helps us better demonstrate the great impact that IEEE, our members, and engineering and technology have on society.

Our work spans ethics, education, humanitarian technologies, public policy, sustainability, and of course, history. In celebrating achievements like today's, we honor the innovators who built the foundations of our field, and we reaffirm our responsibility to support those advancing technology for humanity's benefit.

A deeper understanding of our historical foundations strengthens our ability to build a more sustainable, efficient, and technologically capable future.

History is a practical tool. Studying the evolution of technologies reveals patterns in problem-solving, exposes the trade-offs behind major design decisions, and highlights both successful approaches and instructive failures. Preserving these achievements helps highlight the complexity of today's systems and brings out the human stories of collaboration, iteration, and ingenuity that drive innovation.

These stories are what help the public see engineers not only as builders but as contributors to culture, to safety, and to global well-being.

Since its inception, IEEE has maintained a dedicated history center to document both technical progression and its societal impact. Through programs such as our Global Museum Reach and the Milestone Program, the center makes engineering accessible to students, educators, technologists, and the public. By preserving the record of engineering history, the History Center ensures that our profession's story remains available to inform future research, to contextualize current challenges we are facing, and to deepen the public's understanding of the technologies that define the modern world.

History is not passive storage — it is an active resource. Preserving the record gives future problem solvers a clear view of how ideas evolved, how constraints were addressed, and how engineering decisions shape the systems we rely on today. It also helps the public

understand the technical foundations of modern life and the values that have guided responsible innovation. By preserving our past, we ensure that the values behind our greatest innovations remain visible, relevant, and instructive.

Today's milestone dedication honors a breakthrough that transformed medical information systems, but it also honors the people — the engineers, the researchers, the clinicians, and the visionaries — who believed technology could improve human health. Thank you, and congratulations to all who contributed to this great achievement. By preserving your story, we ensure that the next generation inherits not only tools but also purpose. Thank you.

27:43, Overview of IEEE Milestone Program

Brian Berg, IEEE Section History Committee Chair

So I am going to tell you about the Milestone Program. Again, my name is Brian Berg, and I have been involved with milestones for the last fifteen or sixteen years. I love history, and this has been a great way to really learn a lot and meet a lot of really interesting people. So this whole Milestone Program honors an achievement and not a person. Awards are often given out, but these honor historical achievements that have affected our lives. These must be at least twenty-five years old, and they are also IEEE's most public visibility.

Here is a plaque at the entryway to Qualcomm in San Diego. This honors a technology called CDMA. You may not know it, but everybody who uses a cell phone uses technology that stems from this. Whenever you are traveling around, going from one cell phone tower to another, those are some of the patents of Qualcomm that support this CDMA accomplishment.

The milestone today will be number 298 in the world.

Here is an example of one that is up at Mount Hamilton, up at Lick Observatory. This is one we honored back in 1969, on the fiftieth anniversary of the first centimeter-accurate measurement of the distance from the Earth to the Moon. Well, gee whiz, you might not think — you wonder why they would need to do that. But there are many different applications that I am not going to go into right now. But it is a pretty amazing thing, because those Apollo 11 astronauts left a retroreflector on the surface of the Moon. You can shine a laser beam toward the Moon. If it hits the right spot, you will send trillions of photons. You might get about a dozen back because of the scattering. But when you do, divide the time it took by two, and you will know the distance to the Moon based on the speed of light.



One that I worked in 2023 that was really fun was with Pixar. The milestone they got, they said they thought it was more meaningful than any Academy Award they had ever won. Because Academy Awards are given by — it is kind of like a club of sorts. I mean, obviously there is a lot of merit in them. But when it comes to milestones, these have historical accuracy. These are vetted. These are meaningful things in the technology world, and they respected that, and I thought that was a pretty dramatic statement from them.

So if you ever go across the Bay Bridge toward Oakland, and maybe you are heading to Berkeley or wherever, consider stopping in Emeryville, the very first town, and you can discover Pixar. At the entryway are two plaques, one of them honoring the work that provides the interface used for computer graphics. Whenever you see computer graphics on TV, almost undoubtedly it uses technology that Pixar initiated. And also, many of the algorithms that underlie it are honored by the milestone plaque underneath it from the University of Utah.

Here is another one I was involved with last year. This is the highest milestone plaque in the world at thirteen thousand eight hundred-some feet. This is for the first computer-controlled telescope. And that is a view — if you look out over the water there, you can see Haleakalā in the distance.

Close to here in Mountain View is one for the birthplace of Silicon Valley. If you are ever driving down San Antonio Road toward Route 101 from El Camino, you will go right by two transistors and one diode. These are twelve- to fourteen-foot-tall models of these devices that were the first silicon-based devices built in Silicon Valley. This is why we are called Silicon Valley, because of Shockley Labs that started there. There is a really interesting plaque on the wall there that describes this. The other side of this building has a plaque for Moore's Law. We have often heard about Moore's Law. It is basically talking about how dense we are with regard to the number of transistors on a chip. So these are two very interesting milestones that I was part of recently.

Another one is Shakey the Robot. This is a cool thing. You might wonder what is this? This was an ARPA-funded project that developed technology related to computer vision, robotics, artificial intelligence, and mapping. Whenever you use a map on your cell phone or your computer, you are using technology that stems from Shakey, because it developed techniques for being able to determine the closest way, the best way to get from point A to point B, which is what you do with your mapping. There is a plaque — the one and only Shakey the Robot is at the Computer History Museum.

A milestone that we dedicated a couple months ago is for the FPGA. If you are technically inclined, you will know what an FPGA is. If not, it is software-programmable hardware. We have all worked with software one way or another, but the fact that you could program hardware with software was a real breakthrough. So this dedication was quite a success. And the company that bought it — AMD bought the original Xilinx company for fifty billion dollars. That will give you an idea of how valuable that technology is.

So I want to thank some people. First of all, thanks to Marian Hirsh. She is watching online today. Her late husband is the one who got me into working on milestones back about fifteen years ago. That is Dick Ahrons. So I honor his memory today. Also, thank you to two key players — would Tom Gardner and Rich Clewett please stand up?

If it were not for the hard work that they did, we would not be here today. I thank you very much. We worked as a team, and that is how we brought this together. It was a really fun project.

So if you ever go to the Computer History Museum in Mountain View, you will see on the front wall that there are now thirty plaques there. This is a program that I started to put duplicate plaques. In other words, the plaque we are dedicating today — there is actually, mounted on that wall as we speak, a duplicate plaque at the museum. A lot of technology history in Silicon Valley and elsewhere is honored by those plaques. There is also one that honors work done at Lockheed back in the sixties that actually preceded the internet, and it is a whole interesting search system that also mimicked Google thirty years before Google even existed.

If you go upstairs when you are leaving, the location for the plaque that we are going to be dedicating today is in the hallway right off the main entrance. And this is a little photograph that will be put on that wall.

Milestones have become my hobby. I have a fun time with this. I have fun, and I meet cool people. Thank you.

34:44, Healthcare Industry Perspective

Russ Branzell, CEO and President, CHIME

Deb Muro: I want to say the plaque is very heavy. We are going to have to do wall construction to hang it up, but we are excited about it.

The Computer History Museum is special to El Camino. Every year we have our employee service awards there, and it is going to be fun for our employees to walk by the plaque and see that. It will be memorable. But I want to recognize and bring Russ Branzell up to the stage. Russ is the President and CEO of CHIME — what does CHIME mean? College of Healthcare Information Management Executives, right?

Russ Branzell: She passed.

Deb Muro: It is a premier organization. Russ did fly in for this. Thank you, Russ. We are excited to have you.

Russ Branzell: Thank you very much, Deb. Ladies and gentlemen, distinguished guests, and most importantly, the pioneers in our industry — a special thank you, and truly an honor to be with you today. We are not just here, though, to honor a health system or an amazing defense contractor. We are really here to recognize a moment in human history

that has truly changed the foundation of a major segment of our economy — healthcare — at its very core.

Yes, we are absolutely here to honor this amazing breakthrough that Lockheed and El Camino Health helped create: the first electronic health record.

We got to read some of the information from back when this was being done. Some of the words were: "This is an unbelievably bold vision. It might actually work."

To appreciate the magnitude — the magnitude of this achievement — I think we have to take ourselves back in time a little bit, because I think we take a little bit for granted where we are today. You have to understand that was a period of time in the mid-sixties of unbelievably audacious goals. NASA was trying to figure out how to put a man on the moon.

The United States military was building the first-ever intercontinental computer system to connect every NATO military base in the world on one computer system. The only reason I even know that one is my dad was one of five officers who carried the tapes around the world. By the time I was four, I had lived in nine different countries around the world, and that was all turned on at about the same time this was done. It is amazing when you think about the things that were going on — engineers and scientists around the world imagining a future that only they could understand. Most of us were just trying to figure out how to get a TV in our house at that point. Never mind color TV by the early '70s.

But this group of visionaries asked an unbelievable, revolutionary question, and this is directly from the archives of this: What if patient information could move as fast as human knowledge?

That is an unbelievable thought when you think about where we are today, but to go back over fifty years ago to think about that. Imagine at that time, though, what they were looking at. They were looking at rooms, and yes, even warehouses full of paper records, handwritten notes. The most popular thing on a floor for care was a clipboard and a pen. Matter of fact, just take it even almost thirty years later: when I got my first CIO job, one of the first things they took me to on a military base was the largest building on that military base. It did not have planes in it.

What it had was records — full of paper records.

The largest building on a military base was for paper records. That was almost twenty-five years after this went live. So you have to understand the daunting task that these amazing pioneers took on, and you have to ask yourself: why did they think so differently? Why would people in charge of rocket and space science take on healthcare? Well, I actually have a master's degree in aeronautical science — in rocket science. Rocket science is easy compared to healthcare. Zero doubt. It is numbers, it is engineering. Healthcare is full of people. It is a complex world business, and it has not changed since 1965. Just ask a healthcare CEO.

But I will tell you, their vision was profound: a connected system of information that could follow the patient, improve clinical decisions, reduce errors, and save lives.

That is an unbelievable vision that they created.

Even today, if you think about it, we just take electronic health records for granted. So much so that bells toll when something occurs.

But I will tell you, the standard that Deb Muro has to live up to as the CIO here — the medical record must — there must be something going on in the world, everybody's phone is going off — the standard she has to live up to now for a medical record is: up all the time, accessible everywhere on any device of anybody's choosing, and oh yes, it is supposed to be secure.

That is the standard. It is called perfection, and it started here in 1965. That standard that they live by today is unbelievable when you think about it. Even many years later, some of the founders — some of the people in those pictures up there — are the same healthcare pioneers that actually started the organization I get to lead today. Bill Childs being one of those, a very dear friend of mine for many, many years, who helped start and realize that the organization needed to be professionalized in healthcare, and that is what we get to live with every single day.

But if you think about where we are today, they laid the foundation for everything important in healthcare delivery today: clinical decision support, digital imaging, interoperability, telemedicine, population health, and yes — it would not be a presentation or a speech if I did not say artificial intelligence.

This had to have been challenging at that time. Think about even today when our leaders try to present new concepts and ideas. They have to deal with skeptics, technical limitations, financial risk, operational hurdles. And yes, humans actually do not like to change.

By the way, that has not changed since 1965. Every one of those challenges, great leaders like this have to deal with every single day.

But those leaders, as you look at this great success, never accepted "that is the way it has been done here" as an excuse. They fought and they led forward.

The team here truly believed that patients deserved better. I think, as your comments meant, that is still why we work in healthcare every single day.

As we witness nearly every hospital and clinic in the world — and I get to travel all over the world; I will be in six different countries just in June and July — they all have electronic health records now.

They all operate in a totally different way. Talk to a new resident, talk to a new nurse, talk to a new therapist. They do not know anything other than a world of computerized records.

Shut the EHR off in this hospital, and the world will stop existing for a few moments, and phones will really start ringing.

But it is really an unbelievable privilege to think about the living legacy that they created. One of the first things I heard about when I moved from one career to another — from the military to medical administration — was about this remarkable place called El Camino Health, and at that time, El Camino Hospital, that had put in the very first medical record. And I got to work with a lot of government contractors back then as a staff officer in the military, putting in some of the first medical records in the military. And they all talked about this mythical place out in California. Little did I know I would be standing here so many years later.

But what I really like about today is that this recognition really is not about that technology.

It is about courage, it is about imagination, it is about leadership — the willingness to say the status quo is not good enough.

I think you would argue, and most of us would, that in the United States today the status quo of healthcare is not good enough, and they are challenged every single day to get better, and we all can help with that. To El Camino, to Lockheed, to those visionary leaders who helped shape the future — thank you. Thank you for working so hard for what we get to see today.

We get to see a world that really looks easier moving forward. Yes, things like AI might be hard, but the reason we can see that is because we are truly standing on the shoulders of these giants. That is an amazing privilege we have who get to work in this industry every single day.

Thank you for reminding us of what is most important, though, with these breakthroughs that you created.

The machines and the software are cool — let us just admit it. But the reality is, it is not what is really important. You reminded us that our job is about improving human lives. Congratulations for this amazing recognition. You deserve it tremendously. Thank you for letting me be a tiny part of it. Take care, and God bless.

44:12, Lockheed Martin Perspective

Mark Pasquale, Retired VP and GM, Lockheed Martin Space

You know, I was blessed to have worked for Lockheed Martin for over forty years. And now, as we support our customers and their missions, I get to be part of this fantastic event, again representing Lockheed Martin. So I am doubly blessed, doubly humbled. Our tenets at Lockheed Martin were and remain: do what's right, respect others, perform with excellence.

They are tenets that have been part of my soul for my entire career, along with the mantra for our job at Lockheed Martin, which is to bring people home — soldiers, astronauts, civilians — and in the case of the event today, people at the hospital.

I am sure many people are asking: how did Lockheed Martin become involved in hospitals, doctors, software, and systems? Well, when you think about it, it really does make perfect sense. Lockheed Martin — at the time, Lockheed Missiles and Space — was posed a very important problem that was critical to the customer, much like what we do every day when given difficult problems from the Department of Defense, NASA, the intelligence community, and other customers around the world. The problem just did not require a satellite or a missile this time. It did, however, require systems thinking, dedication, and commitment, the type of thing we do at Lockheed Martin every day.

And it reminds me of one of the greatest speeches, at least in my opinion, by President Kennedy in his address at Rice University in 1962. He talked about why we do things. Let us take a look.

[Transcription of President Kennedy's Rice University address, September 12, 1962]

"This country was conquered by those who move forward, and so will space. William Bradford, speaking in 1630 of the founding of the Plymouth Bay Colony, said that all great and honorable actions are accompanied with great difficulties, and both must be enterprised and overcome with answerable courage. The exploration of space will go ahead, whether we join in it or not, and it is one of the great adventures of all time.

But why, some say, the Moon? Why choose this as our goal? And they may well ask, why climb the highest mountain? Why, thirty-five years ago, fly the Atlantic? Why does Rice play Texas? We choose to go to the Moon. We choose to go to the Moon.

We choose to go to the Moon in this decade and do the other things, not because they are easy, but because they are hard. Because that goal will serve to organize and measure the best of our energies and skills. Because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one we intend to win, and the others too."

"The growth of our science and education will be enriched by new knowledge of our universe and environment, by new techniques of learning and mapping and observation, by new tools and computers for industry, medicine, and the home as well as the school."

So we do things because they are hard. For decades, customers have come to Lockheed Martin because we solve their most pressing problems. Whether it is coming up with the next deterrent, ways to improve science and exploration, providing communications and intelligence systems around the world — we are always there. In this case, the problem came from a hospital, one of our neighbors, a problem that required systems thinking, and when you come down to it, that is what Lockheed Martin is known for. It is what we do. We

were the perfect partner for El Camino Hospital, and together we developed a solution to a very difficult problem.

Consider the requirements for a fully connected hospital system operating twenty-four seven, caring for very sick patients. There is no tolerance for data loss, loss of access, inaccurate orders, or delayed care. Caregivers must be able to securely log into any terminal at any time at a convenient location nearby. Backup strategies needed to be in place for every type of emergency. For acceptance by doctors, the system had to be easy to use, require little training, and be personalized for their practice and preference. More importantly, the system had to be responsive, operating almost at the speed of thought, for approval as a long-term solution.

Remember also the computational capability at this time. You heard about it before. The computers of that era were large mainframes sold by IBM, maintained by them. This 1968 MIS I prototype that we showed had sixteen thousand words of memory — less memory than what is in this Microsoft Word presentation I just gave. Many orders of magnitude less than the cell phone in your pocket. Even the large IBM 360 model in 1975 could barely hold 512 kilobytes of memory when deployed with a large storage expansion rack. These machines were very expensive. They were typically remote, shared across facilities, both in industry and within the hospital environment. The Apollo missions had the same limitations and were able to land on the moon. It is truly amazing what our engineers at the time were able to develop with the tools they had.

Staying with the 1960s, when most of the work was accomplished, and staying with President Kennedy — in an earlier commencement speech at Yale University in 1962, he gave the following quote:

"The new role of our federal government is the major patron of research in science and medicine."

Few people realize that in 1961, in support of all university research in science and medicine, three dollars out of every four came from the federal government. I hardly need to point out that this has taken place without undue enlargement of government control, that American scientists remain second to none in independence and in their individualism."

That was 1961. I raise this quote because the timing is coincident with the work that was performed here, and the fact that the majority of the research dollars at that time in the area of defense also came from the government. And Lockheed was awarded competitively many of those dollars. The alignment of the challenge posed by El Camino Hospital and the resources of Lockheed Missiles and Space at the time formed a mutually beneficial, symbiotic relationship that resulted in a solution that brought people home — a core value of Lockheed Martin today.

One of the novel solutions was the use of a light pen, which you saw earlier. When a mouse was only an early research device in a nearby lab — more than a decade away from

becoming common — the light pen was a brilliant solution for making the data record immediately accessible to all care providers in one connected system. Data entry errors could be corrected at the source, orders dispatched quickly and efficiently.

Now you ask: where did the light pen originate? You did hear some of this earlier. It came from a classified program that Lockheed Missiles and Space was working on at the time. There is the synergy again — the systems thinking that made the effort successful. The light pen made it easier to use a pull-down menu. Today, we would all likely prefer a mouse because of its capabilities, but at the time, the light pen was a better choice. Fortunately, the folks working on this effort had knowledge of the classified program and were able to quickly and effectively incorporate it into the solution for El Camino Hospital.

And as we look back, developing the first hospital-wide computerized Medical Information System was an amazing accomplishment. There was no huge celebration, no front-page credit for the individuals involved. The team was not motivated by personal accolades. They were motivated to come up with a solution that the entire medical staff at El Camino Hospital and beyond would use more efficiently and effectively to take care of their patients. The aforementioned innovative light pen terminals enabled physicians and staff across all departments to efficiently and accurately access patient data and enter work orders. By providing immediate feedback and seamless communication, it reduced cost and errors, improved safety and outcomes, and led the way to modern medical and clinical informatics.

At the end of the day, this effort increased the likelihood that more patients would leave the hospital and come home. Bringing people home — a major tenet of Lockheed Missiles and Space at the time, and a major tenet of Lockheed Martin now. Thank you.

53:20, Historical Overview of MIS at El Camino Hospital

Deb Muro

Good afternoon. I'm Deb Moreau, the Chief Information Officer for El Camino Health. Today's celebration recognizes a historic accomplishment, inviting us to reflect on a bold vision from the 1960s that set the stage for healthcare today and in the future. The Medical Information System was not just a breakthrough for its era. It established a foundation for how we approach complex challenges in healthcare, inspiring us to continually adapt and improve, to create intuitive and transformational solutions. Leadership in this space requires more than technical expertise. It demands a commitment to curiosity for what could be, a readiness to embrace new perspectives, and an intense focus on the goal. It took grit, it took courage, and it took perseverance.

The pioneering work at El Camino Health reminds us that meaningful progress is achieved when we remain open to change while focused on delivering value to our patients, our physicians, our employees, and our clinicians. We will now see a video — and this is a treat — that tells the story of this MIS project. It includes all the things you would want in a good story: it has a beginning, it has a setting, it has a lot of drama, it has heroes, and what I perceive to be a happy ending.

54:56, Video History of MIS

Prepared by El Camino Health Staff

[Transcription of video]

[Narrator:] Long before Silicon Valley became the heart of innovation, before garages turned into startups and ideas became empires, a quiet revolution was beginning inside a small community hospital in Mountain View, California. And what started there would set the stage for a new era in medicine.

It was 1969. Lockheed Missiles and Space, a California-based aerospace giant, was searching for its next frontier.

[Mel Hodge:] Lockheed management said, "Well, we're the leading missile contractor, and we're the leading space contractor. And so the only way up from here is we have to find new businesses to get into."

[Narrator:] And that new business: healthcare. And here is why. At the time, medical records lived on paper — handwritten notes, charts, and folders. Lockheed imagined something transformative: a digital system that could hold a patient's entire medical story, securely, instantly, and all in one place. Engineer Mel Hodge was chosen to lead the team.

[Mel Hodge:] I was at Lockheed at the time, Lockheed Missiles and Space Company in Sunnyvale. We started small and we grew. We probably started with ten or fifteen people.

[Narrator:] But to make it happen, they needed a partner — a hospital willing to step into the unknown. Several of the nation's top institutions were approached. Each turned it down, not ready to take the risk. So the team looked closer to home, to a community-based hospital just down the road: El Camino Health.

And after others said no, El Camino said yes.

[Dan Woods:] If I think back at the individuals that were here at the time, I think it truly demonstrated that innovation is in the DNA of El Camino Health. And it took real confidence to take that bold step — confidence in our people and in themselves — and truly to believe that better care could start right here. For us, it was not about being first. It was about doing the right thing for our patients.

[Michael Millenson:] These guys were willing to be innovative, willing to take a chance, and willing to be part of that culture. And the leadership was — and you cannot underestimate how important that was.

[Narrator:] During the next two years, as Lockheed and El Camino Hospital — as it was called then — worked side by side to bring the vision to life, one challenge stood out. Most clinicians did not type. So the Lockheed team turned to their own aerospace toolkit to help solve it.

[Mel Hodge:] The mouse was beginning to show up then, and we felt that the mouse was not going to be a very good solution. So what we actually did was borrow a technology from a then-secret satellite program — I told you it was going on — that they had actually developed, which is called the light pen.

[Narrator:] For clinicians, it meant simply pointing at the screen and tapping a button. Just one example of the innovative solutions woven into the system as it evolved.

[Russ Branzell:] They were trying to do something so new and revolutionary that maybe they did not even know at the time what they were trying to do, but they knew something needed to be done. So there was probably some unbelievable excitement with absolutely horrific terror going on at the exact same time.

[Narrator:] In 1971, after two years of planning, the management information system finally went live, bringing the world's first digital patient record to the bedside. For a moment, it felt like the future had arrived.

But then reality set in, as the promise of progress collided with the challenge of change.

[Deb Muro:] This was totally revolutionary — to go from a paper-based record to an electronic record — and so it was an adjustment, and there were those who did go through a period of difficulty.

[Dan Woods:] Transitions. Change and transitions — it is never simple. And for many clinicians, it felt like the ground was shifting beneath them faster than anybody was ready for.

[Narrator:] It was a technological learning curve unlike any before, and for many, a hard one to climb.

[Dr. Ting:] Computer illiteracy was much more common then, and the idea of having to do all these steps to enter an order created resistance.

[Narrator:] Doctors complained they were spending more time fighting a machine than caring for patients. Some retired early rather than learn the new system. And when the press caught wind, the coverage turned harsh.

[Deb Muro:] There were almost twenty or more articles written, some with very negative headlines about safety, about how patients were being impacted, how physicians were not on board. And it really did impact the community.

[Narrator:] Soon, people from all over traveled to Mountain View to see what the buzz was about. And when headlines went international, delegates from France arrived, determined to see for themselves whether this controversial system had a future. Meanwhile, inside the hospital, frustration deepened and the team entered what is called the valley of despair, when early optimism gives way to doubt.

[Mel Hodge:] We made mistakes at various points, and then we had to promptly try to correct those mistakes. But it worked out, and everybody hung in there over those years.

[Narrator:] And slowly, over time, things began to change.

At the bedside, nurses were the first to see the difference, and they made sure everyone else saw it too.

[Dr. Ting:] The nurses — I do not know if they were advised to do this, or they thought it was a good idea, but they made it a point to tell doctors how great it was that they used the computer, how much it helped them, and how much it helped patient care. And I think for the most part, that was an easy thing to subscribe to.

[Deb Muro:] Also, nurses were seeing the value of the system in the early days and helped physicians really realize that if they worked together as a team using the electronic record, patient care could be improved.

[Narrator:] And soon, things that once felt impossible became routine. Lab results in seconds, communication that flowed, teams working as one — a hospital discovering that together, progress really could transform care.

By 1974, the San Jose Mercury News reported that El Camino Health's system was saving as much as it cost to run, thanks to fewer errors and better productivity. But the real test was still to come. That summer, the hospital held a secret ballot to determine the EMR's fate, and the majority of doctors and nurses voted yes.

[Dr. Ting:] I think once I got used to the idea of a computer, it became very clear that that was the way of the future. It is sort of like in banking when you go from pen and paper to a computer — you cannot imagine going backwards.

[Narrator:] Within a decade, electronic medical records had spread across the country, changing how we share information, how we treat patients, how we connect care, how we save lives — all through the power of a single record in the palm of our hand.

[Russ Branzell:] It is such an amazing thing. You snap your finger and, you know, you have access to every and all information that is there. That is what they started back then.

[Narrator:] And this is just the beginning.

[Michael Millenson:] The electronic health information that is patient-centered is coming, and not in the very far future. So that is really where we are going.

[Deb Muro:] We now have the data. It is available. It is automated. It is electronic, so that we can actually layer on top of that newer technologies that will allow us to answer any question that we have.

[Narrator:] It is a future where every breakthrough brings us closer to patients having full control of their health.

[Dr. Ting:] That is the challenge that we are up for. That is something we can do. It will take time. There will be a lot of trial and error, but it is a very worthwhile goal.

[Narrator:] From Lockheed's first MIS system to Technicon's early software, and through today's leaders like Allscripts and Epic, El Camino Health has remained at the forefront of every generation of electronic medical records.

[Russ Branzell:] They were the boots on the ground actually trying to see how to make it work. It had to have been an incredible experiment, but yet at the same time it worked. And so even today, we are literally standing on the giants' shoulders — the people who helped do that there.

[Dan Woods:] When I think about what they accomplished, I am honestly moved and extraordinarily impressed. I wish I could have turned back the hands of time and actually just witnessed it myself. But everything they built, every step they took, was about one thing: improving patient lives.

[Narrator:] That same spirit of courage still drives El Camino Health today — the willingness to take a chance, to innovate, to lead, because our patients rightfully expect the very best. And as one of our pioneers reminds us...

[Mel Hodge:] Do not be afraid of risk and do not be afraid of change.

[Narrator:] El Camino Health: transforming technology, empowering care, and inspiring what comes next.

1:05:58, A Conversation with Mel Hodge

Deb Muro & Mel Hodge, Lockheed/Technicon MIS Program

Well, Mel, you were actually the shoulders that everybody stood on. You were on the front lines fighting the battle every day. I am so interested in: what did it take to get El Camino to really agree to do this? What did it take?

Mel Hodge: Well, it took a lot of courage on their part. Some of you may not realize El Camino is a public district hospital in California. It is managed the same way school boards are managed, kind of as an analogy.

And as a result, you have to admire a person running a new hospital — it had been open about four years in 1965 — taking the courage to take on this kind of project. I doubt if there are many school superintendents or other public hospital CEOs who would have done it. And we made an interesting contract deal where we took the financial risk, but he was taking the patient care risk. And if you put yourself in his shoes — his name was Ed Hawkins — you can kind of feel what that might be like, taking what you have seen in all these films on your shoulders.

Deb Muro: Yes, that was amazing. There was some savviness there in that they did the risk agreement with you, and actually El Camino did not pay for a while, right?

Mel Hodge: Well, our deal was strange. Our deal was that they would pay what we asked — what we quoted to them — but they would not pay it until their own industrial engineers could document a saving of at least that much. And so we were taking the financial risk, at least as far as the monthly payment, which is burned into my mind at \$87,250 a month.

Deb Muro: I do not think El Camino paid for a couple of years on that, so that was a good deal on our part.

Mel Hodge: Yes, it took several years.

Deb Muro: So I am most interested in your team. Talk about your team and what it took to really drive this home.

Mel Hodge: Well, as far as I can tell, there is only one person besides myself left alive. But we had some exceptional people, including those who designed the technical system with the understanding that they were designing a system that could be put in any hospital in the country. And so our primary focus was on community hospitals, which are all over — not on university hospitals that tend to be singular in their design, or other specialty hospitals.

And we pretty much succeeded. We, in effect, created our own computer language — or they did; I did not do it. And all we had to do then was plug in constants into a bunch of tables to adapt it to the next hospital we were installing. And to them goes a great deal of credit, because they had the foresight to do that. You have got to remember, this is an era of 65K computers. So those of you who are technical people know what I am talking about.

Deb Muro: Yes. I loved hearing in the video about the Video Matrix Terminal. The success of that was the ability to personalize it or customize it. I think there were like 2,000 changes by 1974 that occurred in that system.

Mel Hodge: Yes, the TV set you saw, which came from a local department store — it took, we had three of them originally when we were developing the system here, and then I think we were using sixty-two of them when we installed the fully operational system.

And even to this day, you see a lot of video terminals on TV and in places that you visit. And almost always, whoever is using it is communicating with a terminal using a keyboard. Well, none of us engineers — and very few doctors — knew how to type in that era. So we had to have another way to do it. And in one of Lockheed's Air Force secret satellite programs — Lockheed had a giant satellite program in that era that was a response by the US to the Russian Sputnik in '57 or '58 — we found the light pen was a good solution, because all you have got to do is be able to point with something that looks like your fountain pen at what you wanted to select on the screen, and it is totally modifiable.

Every hospital — we give them a complete set. Our people adjusted a good starting place, but then their own staff have to go through and put whatever they want on any screen and

set how the screens are connected to various operations. The hospitals in general installed their own systems the way we did it, because we could not possibly get into dozens or hundreds of hospitals, taking on doing that and maintaining that.

So that was one of our ground rules when we developed the system.

Deb Muro: That is amazing. How did you handle the stress of the system with all the newspaper articles and all the attention? And my favorite story is there was a board meeting one night, and you were there sitting in the back of the room, and many, many physicians came in to complain about the system. And overhead — and this creates terror in my heart — overhead there was an announcement that the MIS system was down right during that. Can you imagine?

Mel Hodge: All heads turned towards me.

Deb Muro: Yes. So how did you handle that stress?

Mel Hodge: Well, I sort of had to ignore it to survive. You can imagine yourselves in that kind of situation. I had nothing useful to say.

Deb Muro: That is great.

Mel Hodge: But fortunately, as physicians got more and more used to it, and with a phenomenal amount of poking in the ribs from nurses toward doctors who would not use it — who gave us a bad time — the doctors were almost forced, in the case of those who were resisting it, to get with it.

Deb Muro: Go through the nurses. I am all for that.

Mel Hodge: Yes. If you are ever installing a system or selling a product to a hospital, get the nurses to help you.

Deb Muro: Yes. That is right, Cheryl? Our chief nursing officer. So I read many of your papers. You have written some papers about this project, and I love this quote. I think this really summarizes it.

“ In closing, let me just say that I think that if I knew then what I know now, I might have lacked the courage to even try. But I am glad I did. It is a source of some considerable satisfaction to walk through any of a hundred hospitals or so in the US, the UK, or Canada, and see doctors and nurses and other professionals routinely doing their jobs with a light pen in hand. Last year, while a patient in an MIS hospital, I remember feeling that, along with other patients, I could also feel more secure knowing that computer and communication technology had now been successfully harnessed to augment the vital human skills on which I was dependent. It made it all seem very worthwhile.”

Mel Hodge: You know, on Christmas Eve — this past Christmas Eve — my family took me up to this hospital, and I was admitted for the next six days, which turned out to be the flu.

But I was pretty sick, and I was happy to be there, because I knew — even though this hospital now has much newer and more advanced systems — I knew this place was with it.

Deb Muro: It had to have brought some satisfaction that you were the beginning of all that.

Mel Hodge: Yes, exactly. I want a reference on the hospital — that they were with it. With modern technology, you are going to be well taken care of.

Deb Muro: Absolutely.

Mel Hodge: And I think that is important to everybody in this area.

Deb Muro: Well, thank you.

Mel Hodge: So it is a great satisfaction.

Deb Muro: Thank you, Mel, for your courage, for your work. Thank you so much.

Mel Hodge: Well, thank you.

[Standing applause]

1:15:36, MIS as a Silicon Valley Innovation

Margaret Abe-Koga, Santa Clara County Supervisor, District 5

I wish I had given my remarks when I was up here earlier, because following this incredible lineup of speakers and the videos is really impossible to do. So I will try to just keep my remarks short. But it really is an honor to be here. I have really enjoyed the presentations. It has been both enlightening and inspiring to me.

I have a scroll painting — a Japanese scroll painting my father gave me — on our living room wall, and I think it is a common quote, but it says, "To understand the present, you must know the past." And this program, the IEEE Milestone Program, really signifies that in so many ways. And it reminds us that innovation is not only part of Silicon Valley's story, but it is a part of the story of our community here, our hospital system, and the people who envisioned futures that did not yet exist at that time.

And I always think — I kind of have to pinch myself often — about how fortunate I am to live in this Silicon Valley, this place where innovation happens every day. We are really the center of that in the universe in many ways. And it is really the collaborations too that make that happen. The collaboration between El Camino Hospital and Lockheed that began in 1965 has been the foundational breakthrough that reshaped how physicians interact with technology, how patient information is gathered and shared, and ultimately how care is delivered. And that is really the key.

At our county, as you know, we have a health and hospital system as well, and our mission really is to work towards making sure that everyone has quality healthcare, regardless of background. And technology is a really big piece of that. I think it is really relevant that we are celebrating this today at a time when we are trying to bring AI into our operations. And

so looking back at history really teaches us many things as we move towards the next frontier.

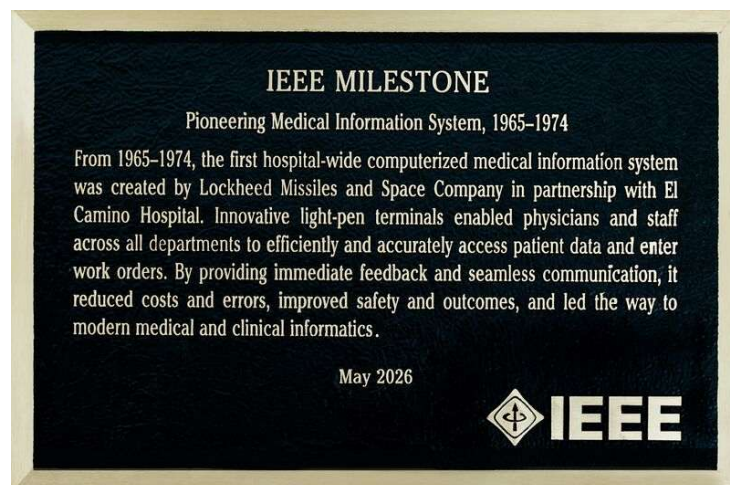
I just want to say thank you again for that partnership. That really reflects what Silicon Valley is all about. Our region is an economic powerhouse because of the collaboration across private and public sectors — across engineering, medicine, and visionaries working in government. Thank you so much, Mr. Hodge, for your leadership, your innovation, and your vision. This is a perfect example of that unique ecosystem.

Again, we are Silicon Valley. We are a local hospital. It is really interesting to hear how they picked a community hospital to work with because of El Camino's nimbleness in being able to try something new. And I think that is really the story of Silicon Valley: you have to be willing to take risks. Sometimes you fail, but that is okay. You try again, and then you come up with something that can be earth-shattering and world-changing, just as the MIS system was.

So I just want to again thank Mel Hodge, Tom Gardner, and Brian Berg for bringing the achievement forward within IEEE. Rich Clewett, for your support. Mary Snitch, with your leadership at Lockheed Martin. And of course, again, thank you El Camino Health and El Camino Health Foundation. It was wonderful to see George Ting in that picture — he was my father's doctor here. So it is just really a source of pride and gratitude to have a world-class healthcare system here at El Camino Health. So thank you again. Thank you for having me as a part of this wonderful event.

1:19:52, Dedication Plaque Unveiling Jill Gostin, Brian Berg & Dan Woods

Deb Muro: We are at the last part of our event, but the most important part: we are going to unveil our plaque. So I would like to have Brian and Dan and others come up, and Jill, to present [the milestone plaque].



Jill Gostin: From 1965 to 1974, the first hospital-wide computerized Medical Information System was created by Lockheed Missiles and Space Company in partnership with El Camino Hospital.

Brian Berg: Innovative light pen terminals enabled physicians and staff across all departments to efficiently and accurately access patient data and enter work orders.

Dan Woods: By providing immediate feedback and seamless communication, it reduced cost and errors, improved safety and outcomes, and led the way to modern medical and clinical informatics.

Brian Berg: So this plaque will also be viewable out in the patio area, and as I noted earlier, it will be installed upstairs, just off the lobby. And also there is a duplicate plaque, as we speak, at the Computer History Museum's front wall.

Deb Muro: We are now going out to our courtyard to have some fun looking at the plaque and some refreshments. So please make your way over there. Thank you.

The presentation ceremony ended.