

inscribed



News from the intersection of Faith, Adventure, & the Arts Special Edition **APRIL 30, 2016**

IN LOVING MEMORY OF YTI'S VISIONARY

Dr. Klein S. Gilhousen



DR. JAY T. SMITH
YTI PRESIDENT

I met Klein Gilhousen in August 2010. The first thing he said to me—with a grin and his arm around Karen—was, “I see you have met my trophy wife!”

Klein had a big smile and a generous laugh. He was interested in everything - math, technology, flight, food, science, history, politics, economics, music, God, and the list goes on.

Beginning in 2011, Klein and I began to recapture a dream that he and Karen had pondered more than ten years earlier: a new type of theological education in Montana. Klein and Karen enthusiastically embraced the idea of Yellowstone Theological Institute

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KLEIN'S LIFE

Klein Shaw Gilhousen

1942 - 2016



Klein Shaw Gilhousen, pioneer and internationally recognized leader in digital communications, passed away April 14, 2016.

Klein was born on April 13, 1942, in West Lafayette, Ohio, to Klein and Eleanor Gilhousen. As a military family, they moved often, living on bases throughout the Midwest and in Newfoundland, Canada. Klein attended Alamo Heights High School in San Antonio, Texas, graduating in 1960. He then attended the Air Force Academy in Colorado Springs before go-

ing on to UCLA and graduating with a B.S. in Engineering in 1969. In April of 1967, Klein married Karen Coulter in Los Angeles.

Klein started working during high school, first delivering newspapers, and later, making pharmacy deliveries. From 1963-1968, he worked for Electronic Specialty Company in Glendale, California; from 1969-70, for Magnavox in Los Angeles. Subsequently, Klein had a fifteen-year career with San Diego start-up Linkabit (1970-85), a company he helped form. In 1985 he co-founded Qualcomm, Inc. and continued to work there for thirty years.

The family moved to Bozeman in 1991, largely due to the presence of Montana State University. Klein was presented with an Honorary PhD in Electrical Engineering from MSU in 2001. Holding 55 U.S. patents and 350 foreign patents, Klein was described as a genius by Bill Jameson, a retired professor of engineering at MSU. "He's made such a tremendous contribution to modern digital wireless communication; it's certainly a valid reason for the university to honor him. He's a genius" (Bozeman Daily Chronicle, May 12, 2001). Klein and Karen went on to pledge 5 million dollars to the MSU

College of Engineering, the single largest gift the university had ever received.

Klein will be remembered most for the invention of CDMA communications technology for cell phones. He cultivated an interest in electronics very early in life, starting with the ham radio, a hobby he continued throughout his life. Klein was also an accomplished pilot and loved aerobatic flying, serving as chairman for the International Aerobatic Club, and competing with both airplanes and gliders. Klein was also a skier, and an instrumentalist, playing trumpet, cornet, flügel horn, and bass and acoustic guitar. He





regularly played in the praise team for his church.

Klein was founder and director of the philanthropic Gilhousen Family Foundation; he also supported the Museum of the Rockies in Bozeman, where he served on the Board of Trustees from 2005 to 2011 and then as part of the National Advisory Board starting in 2012. Most recently, Klein became co-founder and unflagging supporter of Yellowstone Theological Institute, where he served as Chairman of the Board until his passing.

Klein Gilhousen was preceded in death by his parents, Klein and Eleanor Gilhousen, his daughter April Gilhousen, and grandson Bryan Gilhousen. He is survived by Karen, his wife, and children Candance Hall (Seattle, Washington), Philip Gilhousen (Butte, Montana), Aspen Cok (Robert), (Bozeman, Montana), Derek Gilhousen, (Bozeman, Montana). Also by granddaughter Laura Gilhousen, (Missoula, Montana); brothers Michael (Linda) Gilhousen of Spring, Texas; Alan Gilhousen of Beaverton, Oregon; Jon

(Debbie) Gilhousen of San Antonio, Texas; and sister Patti Gilhousen Gup-till (Roy) of Beaverton, Oregon.

The Gilhousen family would like to gratefully acknowledge the kind and considerate team of professionals that cared for Klein at the end of his life, making it possible for him to be in his home, a place he cherished, and surrounded by loved ones. This wonderful team includes the Copper Spring Ranch team, Klein's personal staff and pilot, Cottonwood Case Management, Frontier Healthcare, and SCCA Transition Team. A heart-felt thanks goes to each of you for going above and beyond, for caring with sincere warmth and tenderness for our beloved Klein. We will always be grateful for the love and compassion you shared with us, and with Klein.

Memorials may be made to Yellowstone Theological Institute, online at www.yellowstonetheology.org/giving or via check to Yellowstone Theological Institute, P.O. Box 1347, Bozeman, Mont., 59771. ■

KLEIN, from Page 1

and its relevance for our community and region.

Klein, in YTI's formative years, was a visionary and a champion. From 2012 to 2014, Klein refused to give up on the vision, even when a variety of forces were arrayed against it. His keen insight into entrepreneurial ventures and his passion for a "new way" to approach Christian theological education saw the institute through into reality.

Since November 2014, YTI has made incredible strides in forming classes, procuring partners, and moving towards construction. The vision of YTI has gone viral today. The "church" is the movement of the body of Christ in this world, and because of Klein Gilhousen, this vision will change theological education in our region, and possibly in our world. This issue of *Inscribed* is dedicated to our co-founder, and guiding light, Klein Shaw Gilhousen.

*Klein's Friend, and the President of
Yellowstone Theological Institute,*

Jay T. Smith

inscribed

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KLEIN'S LEGACY

Philanthropist Klein Gilhousen remembered as kind, generous

LEWIS KENDALL

BOZEMAN DAILY CHRONICLE

This story appeared in the Bozeman Daily Chronicle newspaper on April 20, 2016.

As part of his support for the Bozeman Symphony Orchestra, Klein Gilhousen once won an auction to guest-conduct a winter performance of “Sleigh Ride” in front of a crowd of expectant onlookers.

Gilhousen was a proficient musician, a student of the trumpet and guitar, but conducting was a different ballgame. Despite this, he stood and guided the orchestra, baton in hand, through the entire arrangement.

“That’s the kind of guy he was,” said Mary Peterson, executive director of Eagle Mount. “He wasn’t afraid to get up in front of an audience and embarrass himself because it’s for a good cause.”

Best known as a founder of telecommunications giant Qualcomm and inventor of CDMA communications technology in cellphones, Gilhousen died April 14, 2016, at the age of 74. His family said he died from complications following a battle with lymphoma.

A native of Ohio, Gilhousen was drawn to the Big Sky state by Montana State University, in particular the school’s College of Engineering.

the college’s Department of Electrical and Computer Engineering. The donation was the university’s largest to date and the first fully endowed chair in the school’s history.



An “engineer’s engineer,” Gilhousen went out of his way to give talks and presentations to students in the department. In early 2001, Gilhousen and his wife Karen donated \$5 million through their Gilhousen Family Foundation to create the Gilhousen Telecommunications Chair in

“I was amazed that he would be so generous to little old Montana State University,” said Robert Maher, head of the Electrical and Computer Engineering Department, who arrived a year after the Gilhousens’ initial donation. “In the case of Klein Gilhousen, it was love. He loved this com-

“Everyone should have a Klein Gilhousen in their life. He was kind, he was insightful, he was generous. I’m a better person, a much better person, because of Klein.” — DR. JAY SMITH, YTI PRESIDENT

munity, and he loved the department. And that is really rare, to find someone who can take that personal interest and turn it into something so transformative.”

An avid pilot, skier, and ham radio operator, Gilhousen and his family quickly adopted the Gallatin Valley as home after moving to Bozeman in 1991.

“A lot of people do whatever they can for their family, but Klein didn’t limit himself to family. He felt really strongly about supporting his community, because the community really took Klein and Karen in,” said Gilhousen’s sister, Patti Guptill.

In 2014, the Gilhousen Family Foundation donated \$2.8 million to three dozen organizations, nonprofits, and causes across Montana, according to tax documents — the majority located in the Gallatin Valley. The Gallatin Mental Health Center, the Rock Youth Center, the Bozeman Schools Foundation, and the Gallatin Valley Land Trust were among those supported by the foundation.

Gilhousen also served on the board of directors for the Museum of the Rockies and was a member of the External Advisory Council for MSU’s College of Engineering.

“It would be hard to talk to someone in town who hasn’t been affected by him,” said Peterson, citing her organization’s Adventure Days summer program as an



example of the effect of the Gilhousen family’s support.

“Even as they set up their foundation and formalized their giving, they always made sure it tied into this place. They loved this community, and still do,” she added.

Much of Gilhousen’s philanthropic work and life was informed by his Christian faith. Near the end of his life, he devoted his time to forming the Yellowstone Theological Institute, a community-focused divinity school under construction on South 19th Avenue where he was a founder and supporter.

“Klein’s faith was so deeply rooted, it drove his philanthropy, it even drove how he understood his intellectual endeavors as an engineer,” said YTI President Jay Smith. “He really saw his life as an opportunity to help others.”

“(Klein was) motivated through Christian practice...trying to help your fellow man or woman through the difficulties that we have,” Guptill added.

To a person, those who knew Gilhousen described him as a unique, selfless human, committed to his community and the people around him.

“I could go on and on about Klein Gilhousen,” said Maher. “Even though he had had this huge success in his business, he was someone you could walk up to and talk to about ham radio and interests in music or flying. He was a unique person and someone who we are going to miss.”

“Klein was the finest man I’ve ever known, and it was an honor to be his wife,” his wife Karen said.

“Everyone should have a Klein Gilhousen in their life. He was kind, he was insightful, he was generous. You could approach him, and he would say ‘Hi’ and give you five minutes,” added Smith. “I’m a better person, a much better person, because of Klein. He will never be forgotten.” ■

KLEIN'S INFLUENCE

Engineering a new world of digital communications



Klein Gilhousen speaks with Qualcomm co-founder Irwin Jacobs.

PAUL JACOBS
EXECUTIVE CHAIRMAN,
QUALCOMM

Klein was a brilliant engineer and a member of the Qualcomm family for 30 years. He will be greatly missed by all of us who were fortunate to interact with him.

Klein was one of the seven co-founders of Qualcomm in 1985 and played a pivotal role in the development of CDMA (Code Division Multiple Access) technology.

He was also an instrumental force behind our company's collaboration with the United States Telecommunications

Training Institute (USTTI), a non-profit public-private partnership that provides tuition-free telecommunications and broadcast training to professionals from the developing world.

In 2006, the USTTI honored Klein with its Chairman's Award, stating, "Klein Gilhousen typifies the hands-on vigor-



“It is impossible to overstate the importance of Klein to both Linkabit and Qualcomm. Neither would have been a success without him.”

— DR. IRWIN JACOBS, QUALCOMM CO-FOUNDER

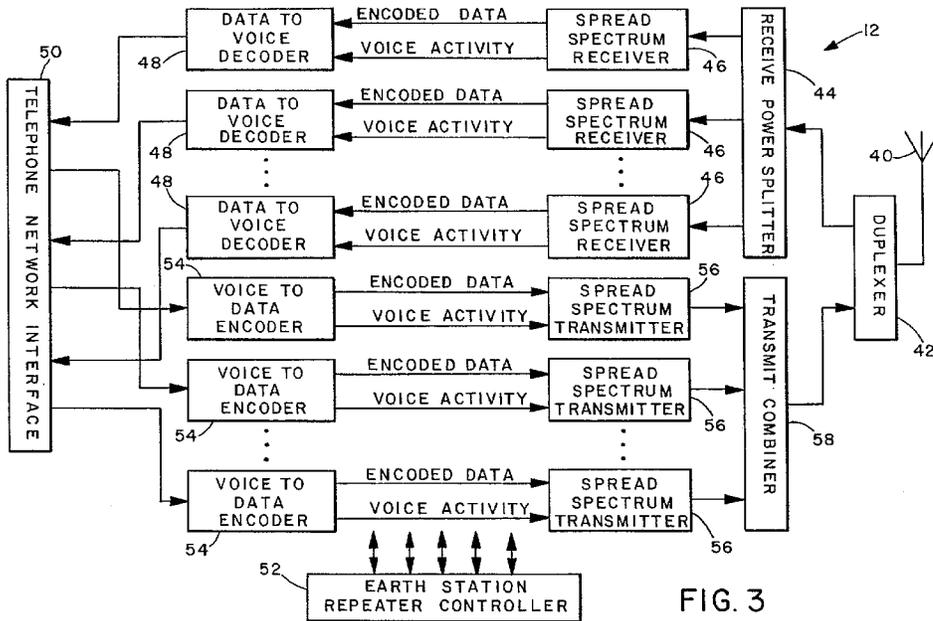


FIG. 3

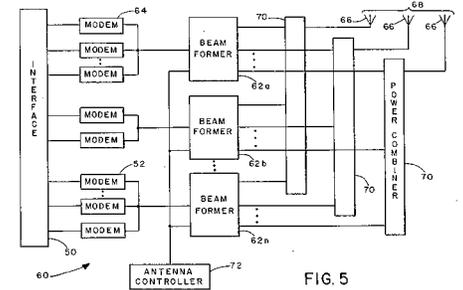


FIG. 5

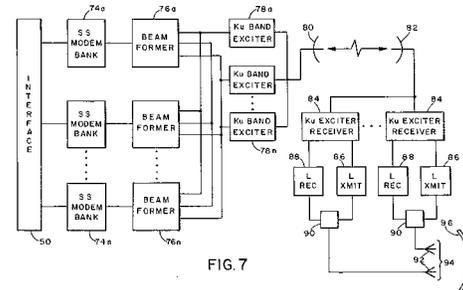


FIG. 7

Diagrams from one of Klein's patents. UNITED STATES PATENT NUMBER 4,901,307, FEB. 13, 1990

ous commitment of hundreds of USTTI volunteer professors who year-after-year provide the tuition-free communications training that has empowered 7,253 USTTI graduates from 165 developing countries.”

Klein was an Institute of Electrical and Electronics Engineers Fellow and a member of the National Advisory Board of the Burns Technology Center in Bozeman, Montana. He also served as an Ambassador for Montana State University (MSU) and an advisor to the Montana State Engineering Department. In 2001, he received an honorary Doctorate in Electrical Engineering from MSU.

Irwin Jacobs, who recruited Klein to work with him at Linkabit in 1970, says, “It is impossible to overstate the importance of Klein to both Linkabit and Qualcomm. He either originated or contributed greatly to the innovative ideas in both companies. Neither would have been a success without him.”

In addition to his groundbreaking work on CDMA at Qualcomm, earlier in his career at Linkabit, Klein made substantial contributions in the areas of satellite modem design, high-speed Viterbi and sequential decoding design, VLSI design, and in addressing control and key distribution for video scrambling systems. ■



Klein teaching at a USTTI course.

KLEIN'S LASTING GIFT

A vision for the community

DR. JAY T. SMITH

YTI PRESIDENT

*Our revels now are ended. These our actors,
As I foretold you, were all spirits, and
Are melted into air, into thin air:
And like the baseless fabric of this vision,
The cloud-capp'd tow'rs, the gorgeous palaces,
The solemn temples, the great globe itself,
Yea, all which it inherit, shall dissolve,
And, like this insubstantial pageant faded,
Leave not a rack behind. We are such stuff
As dreams are made on; and our little life
Is rounded with a sleep.*

— WILLIAM SHAKESPEARE,
THE TEMPEST (4.1.148-158)

Klein Gilhousen was not the literary figure that Shakespeare was; he spoke best in mathematical and engineering concepts or carving trails in the snow with his skis or pathways in the skies with his airplanes. Yet Klein was a poet, a true believer, and imagineer. He was able to pursue “such stuff as dreams are made on...”

Making a lasting difference in Bozeman and beyond

The last few years of his life, Klein enjoyed his wife, his family, and his philanthropy. Through his philanthropy, he sought to make a difference in Bozeman and beyond.

Klein's final great project, his legacy project, was Yellowstone Theological In-

stitute (YTI) and The Yellowstone Center for Faith, Adventure, and the Arts. For Klein, YTI wasn't simply a divinity school or seminary in the traditional mode; rather, it was the future of faith. It was to be the organization that reconciled the world to the Creator. In all of its



Artist's rendering of chapel to be built at The Yellowstone Center for Faith, Adventure, and the Arts in Bozeman.

COURTESY OF LOCATI ARCHITECTS AND WEST ILLUSTRATION

facets, YTI was to teach, proclaim, and adore God and His creation. It was to be a place where students would live out their education as they learned. It was to be the city on a hill, or the lamp on the table, drawing the inhabitants of the greater Bozeman community to its light. It was to be both a channel and a clear-

inghouse for ministry, uniting the efforts of various non-profit charitable organizations and striving to bring even greater light and health to the Gallatin Valley.

Pioneering education and community engagement

Klein's vision was as broad as it was ambitious. He and his co-founders hoped that YTI would become a pioneer in the area of education and community engagement. Klein had the inside track for such a vision: he was a believer, an imagineer, and he knew that all things were possible with God.

I sit here amazed as I think about all the things that Klein could have supported—or maybe even should have supported—instead of Yellowstone Theological Institute. The truth is, he supported YTI because he believed in its future just as much as he believed in the future of CDMA! Klein has donated hundreds of hours and astounding capital to the vision of YTI.

Not only did Klein support the vision, but he also supported his partners in making that vision a reality. Our administrative team and our faculty are recipients of a tremendous amount of love, respect, and trust from Klein. We hold that love as a sacred commission. He believed in us, and we believe in the vision that is YTI. It is a vision for everyone.

A vision for faith, adventure, and the arts

What was so powerful about this vision that it captured Klein? He found the key tenets of the YTI dream to be critical for improving our community and our world. These tenets include:

1. The basic Christian orientation is to love unconditionally, forgive others frequently, and serve generously. It was Klein's belief that if more people consciously followed the way of Christ, then both hate and violence would recede, and the peace of God would preside in our world.
2. Critical and creative thinking make the world a better place.
3. Dialogue is critical to meaningful community. At YTI, interfaith, intercultural, and interdisciplinary dialogues are actively pursued as a basis for nurturing a loving community.
4. Faith must connect to all of life for it to be meaningful.
5. The fine arts and performing arts help create personal and communal meaning, and they are essential to human wellbeing.
6. Nature, recreation, and adventure create personal and communal wellbeing, as well as shape our understanding of existence in the world.
7. Christian theology and ministry is enhanced not only as students examine ancient texts, historical church documents, and contemporary practical



YTI president Dr. Jay Smith works with an institute student.

thought, but also as they engage with their community on a daily basis.

Building a place for the whole community

YTI is designed as much more than an educational institution. The institute is at the heart of Bozeman's Yellowstone Center for Faith, Adventure, and the Arts—a place of community gardens, recreational facilities, artistic resources, and educational opportunities. The Yellowstone Center's Aspen Park property will provide a place where people from all parts of the Gallatin Valley that Klein loved so dearly can gather in true community.

Continuing a legacy of love and respect

It is now up to each one of us to continue Klein Gilhousen's legacy project with YTI and The Yellowstone Center.

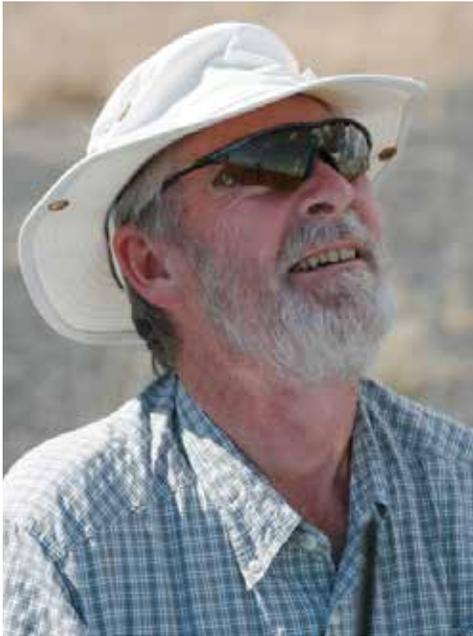
Whereas Qualcomm joined together some of the best engineering minds on

the planet to change the face of communications technology, it is up to YTI to take the "What if?" question of Qualcomm to the fields of theology, humanities, and the arts. It is up to us to continue that critical and creative dialogue for the health of our world. It is up to us to continually cultivate a community that demonstrates a healthy, respectful love for one another, a community that is unafraid of—indeed, a community that encourages—interfaith, intercultural, and interdisciplinary dialogue.

Yellowstone Theological Institute is a vision that started with Klein, Karen, and myself. However, in order for us to see it come to completion, it will require all of us, as a community, to participate. Jews, Buddhists, Muslims, Hindus, Catholics, Protestants, Pagans, and Atheists are all children of the Creator. All of us have the capacity for deep love.

Let us continue Klein's vision together and make the Yellowstone Center an example for the rest of our world. ■

KLEIN GILHOUSEN MEMORIAL



“YTI stands to revolutionize the way we conceptualize theological education and, consequently, ministry today. That is truly a dream worth investing in and one we are proud to be a part of.”

— DR. KLEIN GILHOUSEN, YTI CO-FOUNDER

In lieu of flowers, the Gilhousen family would ask that donations in Klein’s memory be made to Klein’s legacy philanthropic project, Yellowstone Theological Institute

TO GIVE, visit yellowstonetheology.org/giving or call (406) 404-1600



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