

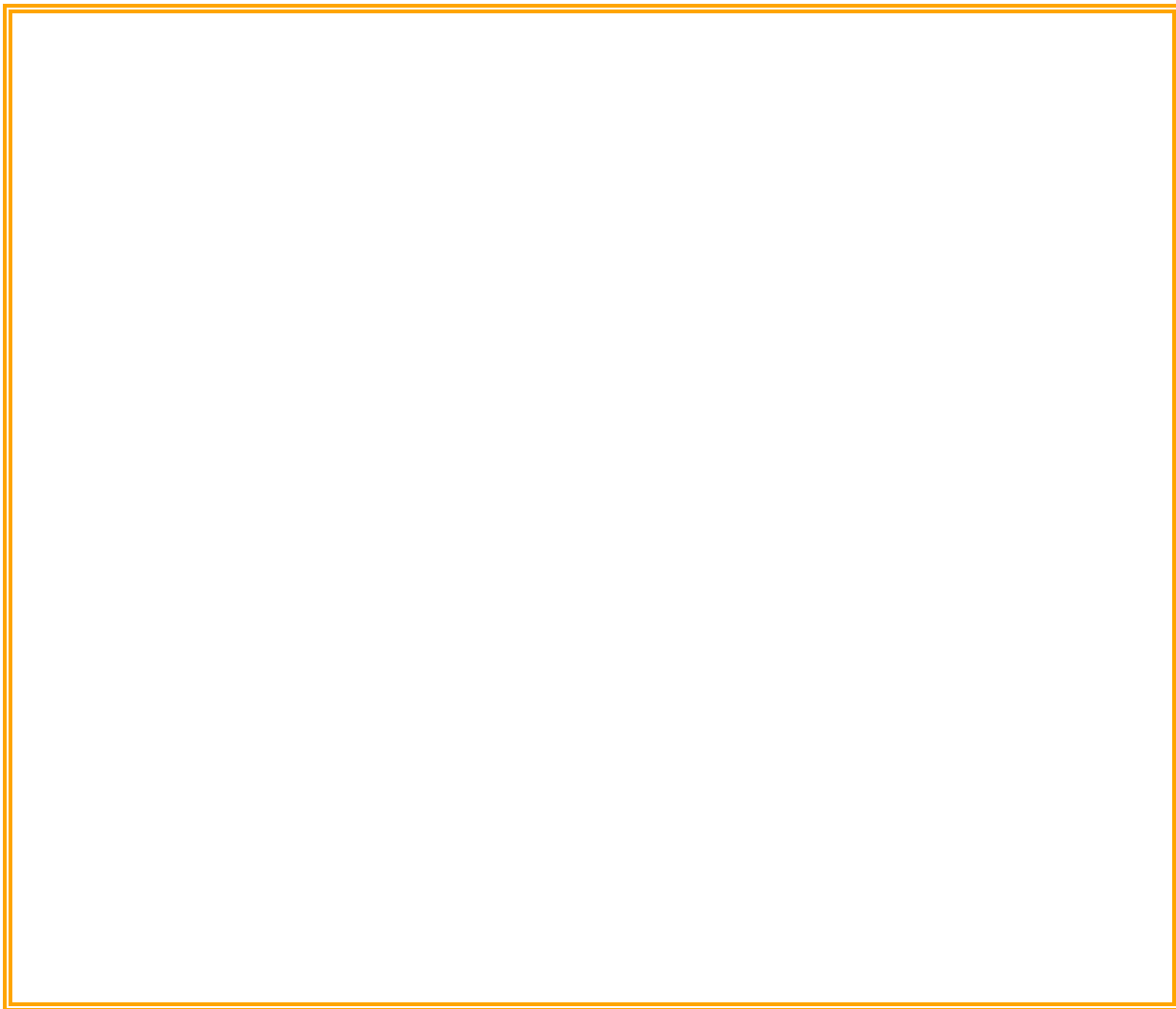
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Sigma



Hand to Mouth

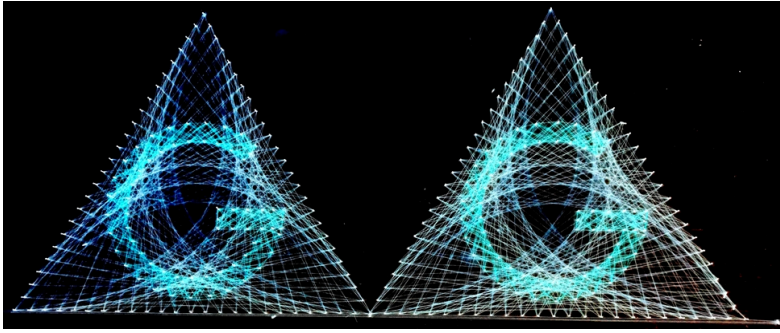
Wobbly Start

Early GVG logo in string art

From the Trenches

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At first GVG had a hard time enticing engineering talent up into the Sierra foothills, still considered by many as a technological

backwater where not much challenging could be going on. In a stroke of luck, Hare finally landed a bay area engineer from Varian and Associates, Bill Rorden. He somewhat reluctantly made the move. He was another Stanford graduate who was well respected at Varian and had been promoted into management, which he realized that he did not like and was ready for a change. Right away Rorden and Roy Hamme, and early DCG Hare company employee went to work redeveloping the vacuum tube amplifiers for Cinerama using solid state components. While Rorden was a vacuum tube engineer, he quickly reinvented himself into a solid-state engineer.



Rorden, also liked to fly, and owned a plane. Once when a big-wig from Cinerama had come to GV for a meeting about the new



amplifiers he ended up staying to long and was in danger of missing his plane out of Sacramento. Rorden flew him to Sacramento in time to catch his plane.

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By 1960 Hare, who from earlier experience with the Bell Lab employees who had developed solid state devices, and Hamme were probably two of the most knowledgeable people in the country in using the new technology, with Rorden right behind them. The Group, as GVG also was soon called, never designed a product using vacuum tubes. Like another juggernaut in not only the consumer electronics industry, but in the high-end television equipment market, Sony, Grass Valley became a pioneer in using solid-state transistors. Many who grew up in the 60s often took their relatively small Sony transistor radios to bed to listen to music or a ball game while their parents assumed they were asleep. Something that would not have been possible a few years prior.

It did not take long before it became apparent that Litton's and Hare's companies could not coexist in the same building. The strain between the two rapidly got worse. Litton was very fugal and accused GVG employees of using too much toilet paper, paper towels, and office supplies. Litton even had one of his employees separate 2-ply sheets of paper towels so they would go farther. Litton's sons, Larry and Charlie, Jr thought they might have played a small role in the growing chasm as they would come home from school and sometimes roam halls over zealously, causing Hare to occasionally yell at them.

It did not help matters that the Group often took over spaces and pieces of equipment that was not part of the lease. The tripping point came when Litton laid off an employee that Hare in turn hired. The two friends never spoke to each other again.

Hare decided they had to move out immediately. All they could find was a rundown structure that had been a processing plant for freezing chickens. One of the groups manufacturing machines was too big to fit through the door so a hole was cut into a wall.

Bitney Springs

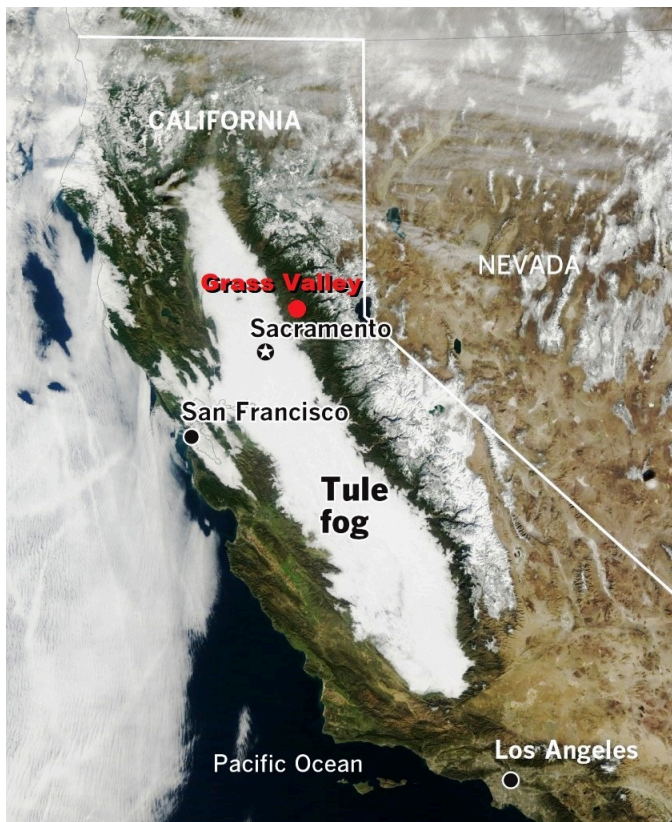
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When the Cinerama order was completed in their partnership

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started looking for property for the company to eventually settle on. One New Year's Day he took a plane ride and spotted the company's future site. It was northwest of Grass Valley on the south side of a small valley, and it ran up a ridge that overlooked a canyon created by Deer Creek. From the top of the ridge off in the distance you could see the Sacramento Valley and it was at an altitude that allowed it to be above the tule fog layer that often settled into the valley in the winter after heavy rains and chili weather had set in. The site occasionally even saw a dusting of snow.



After periods of rain, and colder temperatures that settle into the central valley, a dense layer of fog often sets in, often for weeks at a time. Or until the next rain storm rolls through

A previous owner apparently had planned some development on the land, as it had been graded. Hare now wanted to

buy that 80-acre property. The problem was that the owner wanted \$500 an acre, which Hare thought was too much, especially since it did not have any frontage along the road. So, he bought three acres along the road and put out the word that he was starting a chicken ranch, which he might have conjured up by the previous use of their current digs. The price of the 80 acres came down to less than \$300. An architect from the bay area

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stone. The building blended nicely with the sloping ground and Ponderosa Pines. It cost \$40,000 to build, with Rorden doing most of the wiring.

The building only had two small luxuries, a small bathroom off Hare's office, which overlooked a small lake, and an exterior wall covered with white, gold-bearing quart rock from the Empire mine. The property also had an "A" frame house built on it for the Hares, on the ridge above the plant, secluded by pines and furs with breathtaking views in three directions, especially in the winter when the skies were more apt to be clear of haze. Often the coast range, one hundred miles distant on the opposite side of the Sacramento Valley was visible.

The site became known as Bitney Springs after the road it was on, which took the name of a local spring. The actual spring.



Hare had an A-Frame house built on a ridge overlooking the GVG campus on the company's property

He had two Dash hounds that usually went with him wherever he went, and he drove a five-year-old black Mercedes. Hare used a walking stick which was a battered four iron.

The area at the time had only single

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the necessary service, down Bitney Springs road that ran past the property from highway 20, about 5 miles away. Hare threatened to file a complaint with the PUC on behalf of himself and the neighboring ranchers. The power company added a fourth conductor and now GVG had three-phase power to run their

equipment. For water there was a natural spring on the site which had adequate flow for the present and future needs. Hare had a water tank built up above the building to store the water and provide adequate water pressure.



Forget about finding a market, need to find a business!

Even in their new facility business continued to be slow and weeks passed without any new orders. The Sangamo contract helped keep the company going. Hare and Rorden solved a problem brought to them by the State Department. Many of the State Department's phone systems that allowed the mon

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a device that could be placed over the phone and generate noise to mask whatever was being said in the room. Associated with that gadget they used a Triplett voltmeter, a standard piece of test equipment at the time, added some components and had a product that the occupant of the room could check to see if their phone line was bugged.

The A.B. Dick company gave GVG a contract to build a forerunner of a fax machine. The end user was a railroad that wanted to scan waybills and manifest data during the day, record it on tape, and then send it at night to destinations when the rates were lower. The tape recorder was a two-speed machine. It would record at high speed, but when sending the data, it would use a slower speed because of interference and bandwidth on the phone lines of the day. While a working system was developed and delivered, it is believed that it was never actually used.

These sundry projects and requests kept trickling in, but the company was continually a few payrolls away from insolvency. To help stem the burn rate Hare often would not cash his paychecks. 1960 was a tough year with Bill Rorden putting his savings of \$20K into the company. While the Sangamo contract kept \$50K coming in for a couple more years it was glaringly apparent that the Group had to find a market to serve and had to do it quickly.

1962 had been a financial disaster for the group. Now with the Group facing the precipice for a second time Hare knew time was running out. While at the time Dr. Hare, 55, was still in good health and weighed the same as he did in high school, he was worried about having to financially start over. Bill Rorden losing his investment was also weighing on him. The company decided to concentrate on selling audio amplifiers.

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Early on the Group had a number of things in common

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*they did whatever it took to keep the
lights on
They slowly found steady work building
audio amps*

With some focus on what they were coming to work to produce business picked up slightly in 1963. They made more deliveries of their audio amps, known as models 610, 621, and 622. The company was paying its bills and meeting payroll, but not with much to spare. Even with an increase in orders for their audio equipment, their strategic position did not change much because of the low gross margin caused by intense competition in the audio market. They needed a proprietary product.



David Packard

A low point in 1963 occurred when a former Stanford physics student of his, David Packard, of Hewlett-Packard, called and said they might have a common interest and should talk. Dr.

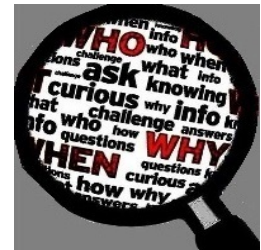
Hare and Hazel drove down to Palo Alto, and he met with Packard. The meeting went nowhere. On the way back with Hazel behind the wheel Hare had her stop and he bought a pint of J&B scotch. He drank it as they crossed the then two-lane Dumbarton Bridge across

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once a well visited stop along I80 between the bay area and Sacramento, he was sound asleep, and she went inside for a coffee break.

The small company continued casting about for something of subsistence to build the company on. They often talked about the television broadcast market, which was growing, especially with a new group of TV stations powering up on the UHF band. If they knew what they were up against in that market they would have been advised to promptly drop the idea.

Dr. Hare's Management Style



Hare's



management approach was very much hands on. From running his company to actual circuit design. He had a workbench by his desk. He usually had one of his dogs by his side.

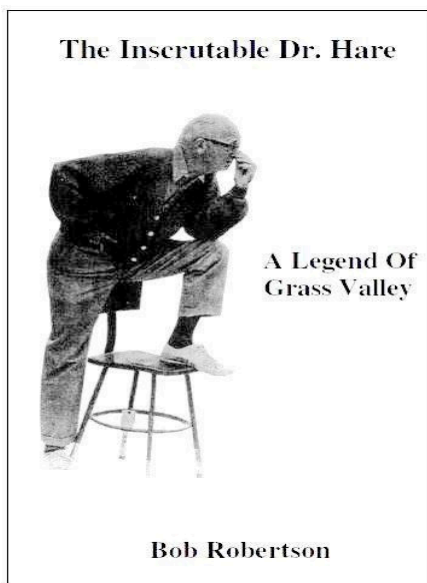
Hare had a 6 foot plus frame. He had a well-worn

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in his office. Outside his office he had two ranches in an I-chunk

always cluttered with parts, soldering iron, small hand tools, an oscilloscope, and other test equipment. But he kept one clear space. It was for his grown-up Dachshunds, Itsy and Red. That space was for the "puppies" as he would refer to them. He would park both of them in the clear space when he was working at the benches. The "puppies" were the reason for the strict five-miles-an-hour speed limit on the property.

The consulting contract with Sangamo had ended. At this time, an employee of Sangamo, Bob Robertson, who worked in their financial area, was looking for a change in environment because of recurring asthma. Chick, the head of Sangamo, recommended him to Hare, who hired him. Hare liked the idea that during the interview Robertson never asked about benefits. Hare started him low, but after a short while gave him a raise.



Bob in 1996 wrote a book about Hare, *The Inscrutable Dr. Hare*. Bob said in his book that Hare wanted to know what was going on in every department every day. From Robertson he wanted to know each day's cash receipts, disbursements, and bank balance. He checked those totals himself. If he found any errors, he would issue a sharp reprimand.

Hare would at times encourage differences in opinion. He wanted to ensure that the right way to do or approach something was arrived at. So, although he was often right, he would sometimes take a contrarian approach to what he believed was right just to draw out responses from those around him. He often did that with his engineering neighbor, Rorden. Bill would then have to make a logical case for what they were trying to do. Often the original track was confirmed. But sometimes a different and better path

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silent room by saying "Dammit, I'm paying you guys too much money to just sit there and agree with me." Hare was the first to admit that he was opinionated and difficult to work for, but many had their lives profoundly influenced by his tenets.

In pushing his troops to question the conventional wisdom they would often find that the discussion had gone full circle. When the same discussion points started to repeat Hare would often say we have been around the mulberry bush already. Rorden once quipped, why not build a revolving mulberry bush.

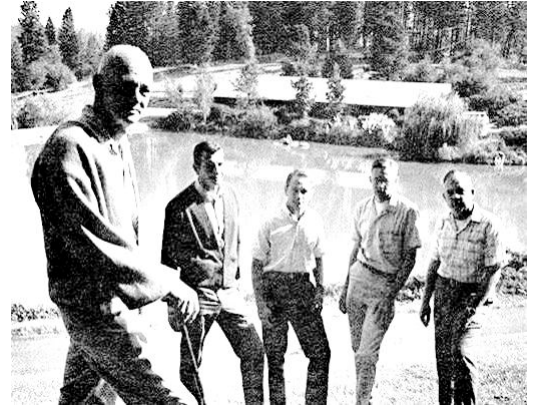
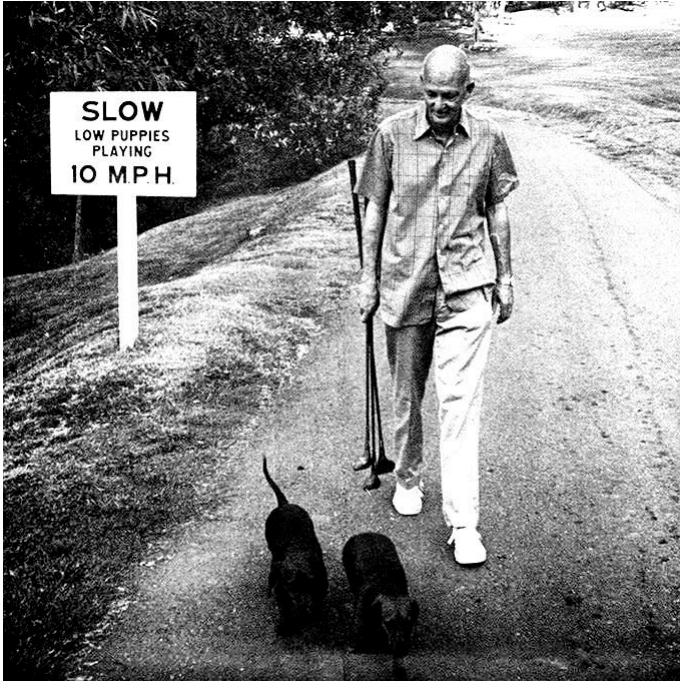
The group manufactured almost everything in house, including metal cases, printed circuit boards, even shipping cartons. Hare was always worried about customer service and if a piece of equipment was under warranty, even after the company started sending loners, if it was not being repaired right away he demanded an explanation.

Hare was such a creature of habit that he got dressed in a certain order. Underwear, shirt, socks, shoes, and then pants. He would not change even after men's pants tapered narrow at the bottom. Hazel had to find pants that would allow him to continue to dress in that order. First time Bob Robertson met Hare he was casually dressed in a short sleeve Sports shirt and khaki trousers. Quite a contrast to the white shirt, tie, and jacket corporate atmosphere he was used to.

Here he is walking from his house which was also on the site

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*Hare
was*



competitive in all he did, not only within the company. But company extracurricular activities also. Here he is with his management inner circle during a chip and putt session on company grounds.

At 26 Bob Johnson was hired as a technician and given his first assignment, winding transformers. He had spent 4 years in the air force as a radar tech and worked a year at an electronics company before coming to Grass Valley. His second day at the company Hare stopped and watched him winding transformers. Hare said he was too slow and that he should be able to do it faster. "Do you want quality or speed" was Bob's reply. "I want both!" Hare said. Bob survived and eventually went on to become the most senior employee of the company in terms of service. Bob became part of the after-hours recreation in the plant with Dr. Hare and Stephen Hare. Sometimes it was a putting game with coffee cans placed around the factory. All games had to include small wagers to satisfy the competitiveness of Hare. Sometimes it was targets shot at with pellet rifles at a steel rollup door. Once he brought out a .22. The next day it was realized that there were holes through that door.

Bob was a good golfer and was always included at the Sunday foursome at Alta Sierra Country club. Occasionally Hare would invite Bob to play on a week-day aft

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Bob mentioned something about the Group. Hare abruptly told Bob to finish his drink and said nothing after that, including the trip back to the plant.

The next morning Bob was summoned to Hare's office and motioned over to sit on the couch. This was known as "couch time" by the employees. Hare chewed Bob out for mentioning Group business in public. Social time was not for discussing business according to Hare, especially because you never knew who else would be listening. Hare would not break his own rule to reprimand Bob in public or even outside of the group's facilities. He waited until business hours the next day.

In 1963, a change in the "Groups" fortunes was going to start to take place. That part of the story is in the next article.

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