

# Grass Valley

## How a couple small towns changed television

If you lived in Croatia, Tanzania, Yemen, Myanmar, Papua New Guinea, El Salvador, Bolivia, or almost any of the 195 sovereign countries recognized by the United Nations, and if you are involved with television engineering or production, there's a small town in the Sierra Foothills of Northern California whose name you would probably know. Even in most places in the United States, you would not know it as a place, but a brand.



This book will explain how and why that is so and the impact it had not only on two small towns, Grass Valley and Nevada City, and the surrounding area, but also on the entire television industry. At one time it was claimed that more people per capita worked in the television industry in this area than anywhere on the planet, including places like New York, Los Angeles, or London. The book is going to resolve if that per capita claim is, or was ever true, and will never-the-less demonstrate how being an important part of the industry has affected the area. Most people who live in the local area don't know these facts. Yet television production movers and shakers regularly pilgrimage to the area to hobnob with the technical wizards that help make their visions a reality.

The Grass Valley Company which started the phenomenon in the area, originally grew out of the D.G.C. Hare Company, founded in 1949 in Connecticut by Dr. D.G.C Hare. The company mainly produced audio and data recorders along with other special projects for the Navy, MIT, and a few others. The company was a hand to mouth operation financially and in 1955 Hare sold his company to Sangamo Electric Company. In 1958, at the urging of fellow Stanford alumnus Charles Litton Sr, Dr. Hare moved the company, with the blessing of Sangamo Electric, to the small town of Grass Valley, Ca.

Litton and Dr. Hare had gone to Stanford together and Litton had a company, Litton Industries, in the 'Silicon Valley' area long before it was known by that moniker. Litton produced high power vacuum tubes, known

as magnetrons, which were used for radar and microwave applications. Litton sold most of the company and moved the companies Glass working Lathes business out of the bay area in 1953 and up into the Sierra foothills after he fell in love with the area. Up until that time the town of Grass Valley and the adjoining town of Nevada City survived off the lumber industry and rapidly diminishing gold, and other related mining. While Litton and Hare's group were allies at first, that relationship didn't last.

Shortly after the move to Grass Valley, Dr. Hare also had a falling out with the Sangamo management, and they split official ties. However, Hare and his group continued to produce product for Sangamo. That group of people literally became the 'group' in Hare's new company – The Grass Valley Group, formed in 1959. The Group brought several creative and key engineers together to find a way forward with his new endeavor. The new company under Hare's direction continued to live a few payroll cycles away from oblivion. New products from the company came and went. They created a device for the state department that let diplomats know if their phones were bugged, and if so, the device would generate noise to mask any conversation in the room. They built an early fax machine geared for railroads that would scan waybills at high speed during the day and transmit them at lower speed at night when phone charges were lower. They produced and sold sound equipment that was installed into movie theaters. Partially from that, they produced a line of audio amps that were mainly sold to radio broadcasters.

As they managed to acquire income it was invested into creating a campus where engineering and creativity could flourish. Sometimes through hard work, and ingenuity, and sometimes with a bit of artful misdirection there emerged the original Grass Valley standalone facility on Britney Springs, on the cuff of the prairie and Sierra foothills east of town.

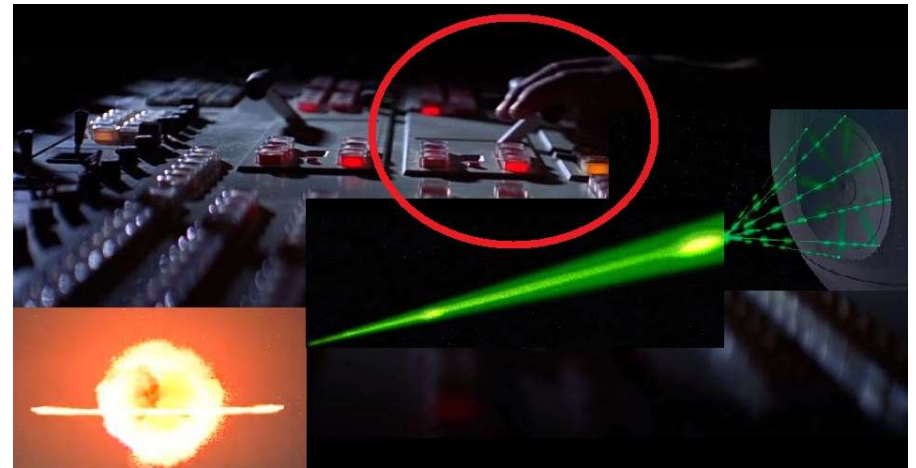
But by 1962-63 the company was facing financial peril again. It was at that time an ally with San Francisco station KGO, an ABC-owned television station, suggested that if they made some refinements to a video distribution amp, ubiquitous in television stations, that they might be able to compete against the likes of the then giants RCA, and GE among others. Some thought that idea preposterous, but in short order they produced their first model. From then on when opportunity sprang up, the group was able to respond quickly to each new avenue presented to them. Responding to an emergency that ABC had leading into the 1964 Republican Convention

gave the Group their big break with that network. ABC asked if the Group could produce a “Proc Amp.” Dr. Hare’s first response was “What the hell is a proc amp?” Within 10 days they had a working prototype that was even in a case. That was the Groups way early on. Respond quickly to opportunity. As the story will show, years on the company did not always have that in sight.

From the products that were rudimentary processing equipment used by television broadcasters, the group produced more exotic and complex systems that moved the company up the professional television broadcaster food chain. They pushed product lines that had been pioneered and developed for twenty years by the industry leaders of the day and soon had the entrenched players following Grass Valley’s lead in innovation.

The Group became the dominant player in video production switchers. These are devices that allow all the layers of graphics, effects, and a myriad of sources to be integrated into a complex mosaic of video. Oh yeah, this is all done in real time while the newscast, sporting event, or entertainment show is happening.

By the mid 1970’s the group had enough of the high-end video market that one of the props used to destroy Princess Leia’s home planet of “Alderaan” in the first Star Wars film, was a video ‘fader bar’ on a Grass Valley 1600 video production switcher as seen below. This was the second generation of video switcher production equipment developed by The Group.



Grass Valley continues to dominate this segment of video production equipment. While the group’s equipment was quite impressive then, it pales in technology and capability to what they offer now.

The book is going to look at how Grass Valley, as the company is known now, sans Group, which was dropped from its name many years ago, had developed the video compositing and effects technology. At times that meant betting the company. There were many successes, and a few setbacks that have occurred over the years. It will also look at the people and culture that designed, manufactured, and equally important, the people who make this equipment ‘sing’ when in use.



Internally the company is still often referred to as the Group. The brand is so strong that many in the television industry simply refer to it as “Grass.” The book will also cover the trajectory as to why the Grass Valley logo is purple when you would think it would be green. It was green until quite recently.

The story will include how the group was sold into larger corporate entities and spun back out into holding companies and other larger players, a half dozen times, and it is currently in the process of being cast out again. Several prominent players in the industry have had part or all their companies intertwined with the group, and today it is the Grass Valley name that survives, minus the green lettering. There are DNA fragments from dozens of companies in the “Group,” some that date back into the 1800s.

At one time the Group employed over 1200 in the area and it was the largest employer in Nevada County. Now its presence in the area is a shadow of itself. Less than 100 still work in Grass Valley itself. The center of gravity for the company is now in Montreal.

But the story of the towns of Grass Valley and Nevada City involves much more ingenuity and engineering swagger affecting the television industry

than just the namesake company. We will look at how a mini Fairchild-effect occurred in the area. Like Fairchild Semiconductor started in San Jose a couple of years before the group, E Unum pluribus occurred – from one, many. A few of the companies that arose from Fairchild, many second, third, 10<sup>th</sup> generations out, include Intel, AMD, Altera, LSI Logic, and National Semiconductor. Some have come and gone like NeXT Computer, and Amdahl. These early companies produced a ‘food chain’ that became ‘Silicon Valley.’

A similar thing on a smaller scale happened with the Grass Valley and Nevada City area and the Group. Well over a dozen companies spun out of the Group. The area attracted other high-tech companies to the area. Some to support the “video” companies, some just to tap into the talent pool that had assembled in the area. The original Atari gaming console was developed in Grass Valley.

What today should be a couple adjacent sleepy small towns that came to be because of gold and logging were deflected into a new trajectory by a mine owner in the 30s and 40s who wanted to help the towns through the depression. Part of his legacy allowed an electronics pioneer to choose to settle in Grass Valley into a never completed hospital, who then enticed his friend and colleague into what was probably the first startup incubator in the world, as others followed in that building. Above is what followed.

The final question in the book will address the fact that the area probable won’t continue in its previous role as one of the video high-tech centers in the world, but whether its high-tech employees can continue to impact technology in other areas.