The Decision-Making Process In Growing A Regional Sound Reinforcement Company
The objective was to prepare the company to do larger shows independently

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Spider Ranch Productions
Owner/Founder Alex Moran

For a regional sound company, as in any growing business with significant hardware costs, equipment purchases can really affect cash flow and strain the budget.

The challenge is to make smart choices and stay within a set budget without compromising quality - a course being navigated by Spider Ranch Productions Owner/Founder Alex Moran.

With a office/warehouse in South San Francisco and another warehouse at the original Spider Ranch in Pescadero, CA, Moran has taken this once small regional sound company to the next step by servicing more corporate, installation and live concert accounts.

Spider Ranch has partnered with other production companies in Northern California to produce larger arena events and street fairs.

While still planning to continue these strategic partnerships, the objective was to prepare the company to do larger shows independently. To do so, more horsepower was needed.

Moran figured that his existing main concert rig gave Spider Ranch Productions the capacity to produce live events in a range of 8,000-10,000 people. The goal for acquiring new gear was to increase that capacity to 20,000.

In order to take the business to the next level a sensible plan was needed before money was spent.

First was the task of defining all equipment requirements, second a budget was put together for each of the major components in the signal line.

Loudspeakers would be a huge investment, but luckily Moran had a solid relationship with McCauley Sound who was already committed to helping Spider Ranch Productions grow.

The main PA expansion was covered with the addition of 16 McCauley MLA6 cabinets and 8 MS6 subwoofers.

Some of the Spider Ranch line array
inventory from McCauley Sound

Choosing the power amplifiers involved not only cost of the amps themselves but also the expenses of new snakes, input/output panels, and other ancillary gear that could add another $7,000 to $10,000 to a tight budget.

Ideally the new amps would also have digital control and loudspeaker management features, but they still needed to work seamlessly with the analog components in the existing system. The only viable budgetary option was to somehow integrate new digital-management amps with the current analog amp inventory.

A couple years prior, Moran had purchased a Dolby Lake Processor. "It was the best processor on the market at that time – it did what I needed and more," he notes.

As an added bonus, the processors were outfitted with Dante – Audinate's digital audio networking technology, and Moran soon got up to speed on Dante's capabilities and how it could be used to get greater control of a system.

He also realized that Dante could control the analog amps and the preferred new digital-management amps. "I didn't realize how easy and inexpensive interfacing the amps was going to be until it was all put together," he says.

Because Spider Ranch was already been using Lab.gruppen FP series analog amps, the decision was that the new amps would also be Lab.gruppen.

Moran is an admitted fan of the brand, "Lab.gruppen models are totally reliable and superior in sound to any other amp I've ever used in my 32 years of audio experience."

It also helped that Lab.gruppen recently purchased the Lake Technology brand from Dolby Laboratories, and that the newest line of digital-management amplifiers, the PLM series (Powered Loudspeaker Management), features Dante enabled Lake Technology.

As an aside, Lab.gruppen is releasing a standalone version of the Lake processor similar to the now discontinued Dolby Lake Processor.

New PLM 10000Qs and were acquired to meet Spider Ranch Production's needs. The original stand-alone Dolby Lake Processor runs the analog and digital-management amps together and hassle-free.

From the Dolby Lake Processor the analog snakes (already in inventory) connect to the FP amps. As soon as the amps are plugged in, Dante recognizes them immediately and they show up as icons in the program window on a computer.

All the digital components of this system are on an Ethernet network. From the Lake Processor, CAT5 – or Ethernet cable – runs to a conventional networking 10/100-gigabit switch that can easily be found for less than $80.

After that, just about any other digital component or networking device can be plugged into the switch.

Spider Ranch is in the process of adding
amplifiers to increase their live event capacity,
all Lab.gruppen PLM Series

Again, anything that gets connected into the system is recognized immediately by Dante and can be controlled in a single program window on a computer.

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In this system a stack of PLM amps is typically set up for the left channel and another stack for the right channel. At the top of each stack, there is a 10/100-gigabit switch.

Because Lab.gruppen included the Lake Processor technology and it's Dante enabled, these amps can be connected to the switch at the top of the stack with just Ethernet and then connected to the Front of House switch.

In the program window, each amp can be controlled individually or grouped together and controlled as a unit.

Moran has noticed an audio quality difference. "By staying at the native sampling frequency of 96 kHz in both the Dolby Lake Processor and Lab.gruppen PLM amps, you benefit from minimum A/D and D/A conversion latency, get great sound quality all the way to the loudspeakers and can take advantage of the Lake 32 kHz + EQ without adding any artifacts."

This results in a very low THD of 0.00063% typical, 20 Hz to 20 kHz, unweighted with 113 dB of dynamic range after the combined A/D and D/A conversion.

"With the added advantage of true voltage peak limiting in both the Dolby Lake Processor and PLM amps we are able to take maximum advantage of the high efficiency/high power characteristics of the McCauley loudspeakers.

"What's more is that I can run other things across the network at the same time. Dante just doesn't care whether it's sound or even the Internet. To Dante, it's all data."

Because Dante works on Ethernet, the same networking protocol is used for LAN's and the Internet, so any data can be run on the network simultaneously.

Alex Moran setting up the Lab.gruppen PLM amps
an Ethernet cable connects the switch at the top of
this amplifier stack to another switch at Front of House

The same laptop used to run the sound system is connected to the Internet to run daily business, and communicate with clients and vendors, while working at a show.

The savings on the new setup has been a real relief for the tight budget. Considerable money – about $10,000 – was eliminated for items that would usually be allocated to connect analog amps to the system.

Instead of buying costly copper snakes and input output panels, Ethernet cable and common networking devices were found at a local big box electronics store.

If any of the networking devices ever fail, a replacement can easily be found.

Savings will keep on coming; storage space, transportation, and setup time are all reduced and less time will be spent maintaining the connectors on copper conductors.

Lately Moran, a true audio geek, has been eager to talk about $100 wireless routers, inexpensive Ethernet cable and "off-the-shelf" switches bought for a pittance. He's pretty happy with the new PLM amplifiers, too.

With the larger new main PA system in place, Spider Ranch is ready to take on more challenging shows and make the leap to the next level.

Shannon Dunn is a writer, photographer, graphic designer and web designer.