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Singing Cowboys, Fast Horses, and Team Roping: Keeping SAS® Users Calm and On the Trail

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**Abstract**

Managing and supporting SAS system and JMP software at a large organization is a daunting process. Many large organizations began using SAS system software in the 1970's and greatly expanded usage in the 80's and 90's. Unfortunately, for many SAS software client sites, increased usage caused the evolution of a byzantine maze of licensing agreements administered by different departments. Software installations typically reside on a variety of server platforms, and end users often need more local support and training than is available. In the late 1980's and early 1990's, the advent of SAS and JMP® software on desktops led to a further mushrooming of licensing and support issues at customer sites. Updating SAS setinits and JMP® passwords burns up valuable time as end users try to track down those responsible for paying the SAS Institute renewal invoices. Further complications can arise when the person with most of the SAS administrative knowledge leaves the position. A means of handling this situation is the creation of positions with organization-wide responsibilities for license administration, technical support, and coordination of training. This paper describes roles, activities, processes, and techniques developed and used in a highly-regulated environment to rapidly configure and deploy SAS and JMP installs, provide support and training, and generate appropriate feedback and metrics.

Introduction

This paper centers around three themes that are critical to supporting an installed SAS user base in a highly-regulated, time-critical environment. These are communications ("singing cowboys"), rapid response ("fast horses"), and teamwork ("team roping"). A well-supported SAS infrastructure can make a real contribution to accelerating many aspects of research, development, manufacturing and marketing.

Singing Cowboys

As the cowboy workers drove North, they were confronted with many problems. How could they keep awake during long shifts in the saddle? How could they keep alive during a cattle stampede? What could they do to keep the finicky longhorns from running amuck during a storm, an Indian or outlaw attack? Singing was the answer. Much of the work was

monotonous so music made the long days a little easier. Cowboys sang to their cattle to calm them down. They sang to each other to ascertain their positions in relation to the herd. They sang to keep awake during the long roundup. The cowboys even devised special "cow lullabies." Cattle herds were easily spooked, but a stampede was a dangerous way to break up the monotony. So night riders would circle the herd, checking for signs of danger while crooning low, restful songs to the cattle.

*Glen Seber, The Duncan Banner
<http://www.texhoma.net/~glenchr/p501.html>*

There are many forms that communications can take in an organization. The obvious one is conversation in person or by telephone. Less direct methods can include email, interoffice mail, electronic newsletters sent within emails, webpages, electronic, wall and video bulletin boards, and live video or web-based presentations.

Cattle just naturally love music, and many a herd that went up the trail snored to the tune of some cowpuncher's fiddle.

J. Frank Dobie

It is important to use the appropriate subset of communications methods for a given situation. For example, it is not appropriate or even possible to attempt to contact every single user by phone in order to relay the new annual setinit for PC SAS software. In this case, with a large number of users, you would certainly want to use a mass-contact method such as a group email list specific to the group of SAS users. However, even though it may be entirely appropriate to send an email with the new annual setinit to SAS users so that they can re-initialize their software for another year, you should use caution. Features of your email software, such as no forwarding and no copying and pasting, should be used to increase control over the distribution of this kind of information.

Additionally, users must have the ability to find resources for accurate information quickly. The growth of various information management resources is on the increase but often they are hard to find and use. The lack of information is not the obstacle — but rather how to sort, filter, and assimilate the information the way SAS users need it. With so much to do and so much information coming at users, it's easy for them to get frozen in their tracks. Users claim to need very high levels of information to perform effectively but are very frequently unable to handle the volume of information they receive.

In problem situations do not confuse them by over-elaborating but rather make your message short and clear. The user's attention will be lost if your message is too long. Keep emails succinct. Do not give users an opportunity to go on a mental vacation or they will quickly delete your message. Subject lines that grab their attention and collapsible sections within the communication allow the reader to quickly ascertain what kind of information is being shared and decide what portion of the information is most important to them.

Another method of communication is a website. An effective one with easy-to-use links to pertinent information can be extremely valuable to a user. Such a website can provide a central location for them to access what they need when they need it (LaBore, 1997).

The steers stampeded in grand shape, the herd splitting up into a dozen different bunches. I finally got them stopped and, after singing a few "lullabye" songs, they all lay down and went to snoring.

Charlie Siringo

End users need a variety of information. Some examples include

- licensing (costs, annual setinitis)
- version upgrades and install procedures
- hardware/software requirements
- learning opportunities (seminars, demos, conferences, instructor/video/computer/web-based training classes)
- troubleshooting tips
- industry trends
- emerging technology information
- how to find/acquire reference information, including manuals (both electronic and printed)
- information about in-house evaluations/tests of new products
- surveys
- organizational standards and operating procedures

Orders were given to sing when you were running with a stampede, so the others would know where you were. After a while this grew to be the custom on the range.

"Teddy Blue" Abbott

Precise communications on technology issues can have a major payoff for your organization. Nearly everyone has observed a

situation where the "next great thing" in information technology has triggered a stampede in a certain direction. Even though the herd may seem to be getting away, good communications throughout the process may help "turn" the herd and put a stop to the stampede. The value of this will be obvious if hindsight shows that the herd was about to go over a cliff!

Differences in perspective likely exist in your organization, especially between IT technologists and end-users. IT typically must meet business needs and also set strategic direction. You may be caught in the middle, between IT technology architects and end users.

You will find that IT architecture staff seek to limit tool proliferation so that sufficient support can be provided to end-users. However, as a front-line person interacting directly with business customers, you know that end users want state-of-the-art reliable tools with an easy learning curve and quality support.

Undoubtedly, you will realize that tool adoption will be accelerated by early adopters and slowed by late adopters. Synchronizing tool replacement is difficult yet important. Thus, clear and consistent communication must be maintained between other IT staff, yourself, and users regarding technologies and business needs.

Within regulated environments, you may have access to technology that exists in the form of *Methodologies*, such as Systems Development Life Cycle (SDLC); *Policies*, such as Computer Systems Validation Policy (CSVP); and *Best Practices* (GxP; Good Laboratory Practices, Good Manufacturing Practices, Good Clinical Practices). Following these, and other technology standards, enhances your chances of success when resolving business problems (LaBore and Burger, 2000).

Fast Horses

Head 'em up, move 'em out.

Trail Boss, "Rawhide"

Speed can take many forms:

- rapid response to problems
- rapid conveyance of new information
- rapid involvement of others when needed
- rapid deployment of products
- rapid reconfiguration of products as needed

The first step in responding quickly to a user is to clearly understand their specific needs. Therefore it is important to make it easy for customers to communicate their issues and interests to you so you can quickly respond. Many organizations have help desk and trouble ticket systems that are used in part for this purpose. Often support response is directly evaluated using a metric or set of metrics arising from information captured in the trouble ticket system. It can be helpful to have a standard service offering document, in which problem acceptance and resolution times are clearly defined based on the type of problem (LaBore and Thomas, 1998). This structure

sets a target level of support obligations and helps secure user confidence in the support by establishing a “contract” between users and support staff. Metrics collected - such as average ticket acceptance time, average resolution time, and a breakout regarding the major categories of problems - can provide helpful performance management information for support staff.

Dramatic benefits can be realized from rapid and effective in-house support of SAS software. However, user frustration due to technical problems can decrease software effectiveness. Users may never fully realize the power of the software as it applies to their business problem and through negative comments to others they can decrease adoption of the software and undermine managerial support for the software (LaBore and Burger, 2001).

Technical support should provide user assistance such that it fosters technical independence. If you explain steps to users they can begin solving problems on their own.

Because of factors ranging from economic pressure to technology acceleration, IT support staff must work quickly or face lost business. Response time can be enhanced by the ability to communicate and share knowledge.

Enhancing the effectiveness of SAS software within a company requires that:

- end-user acquisition of software be swift
- training must be timely and appropriate
- rapid reconfiguration must occur in response to changing
- needs/priorities of end users
- technical support must be global and 24x7x365
- response and resolution times must be measured and constantly decreasing

The more you ride your horse after cattle, if you take care of him, the better horse he makes.

Jesse James Benton

A fast horse is one you can gather antelope tails on.

“Kid” Morley

A man afoot is useless.

Jim Flood

It is an old saying on the Plains: A man without a horse has no business on the prairie.

H. M. Stanley, 1895

Try to imagine the Lone Ranger without Silver.

Jane Tompkins

When cutting cattle, cut them downhill with your back to the sun.

Oscar Thompson

Team Roping

Teams are essential to the performance of any organization. Just as cattle drives had cowboys who worked together to move the herd in the desired direction, computing support has people who come together to achieve a common objective.

Those supporting SAS and JMP may not always have “official” roles, but certainly they have the shared objective of moving the organization forward toward a goal.

In this effort it is important to use multiple resources, including

- formal in-house SAS tech support
- SAS Institute tech support
- knowledgeable users
- other systems staff

Often, it is possible to match people with interest and knowledge of SAS system software (or JMP) with those needing information. Some ways to encourage these interactions include the creation of a webpage on your intranet (LaBore, 1997), creation/participation in user groups and forums, formal conferences (such as the regional user group conferences, PharmaSUG, SUGI, SEUGI), and building knowledge bases (trouble ticket archives, etc.) that can be accessed by others.

It is also important to have standard processes that all users and support staff know about, such as a common support center phone number to call for help. Let users know who to contact for a given platform (OS/390, Unix, Windows, etc.) and when to call SAS Institute technical support directly.

Teamwork can take the form of “virtual teams” that come together around a common objective, usually either the resolution of a specific problem or the testing/evaluation and acquisition of a new tool. These teams may have one or more of the following characteristics:

- they may coalesce as a result of personal networking
- they may be site-specific
- they may be interdepartmental
- they can be formal or informal
- they may be cross-functional; i.e., composed of people from different functional areas of the organization
- they can be semi-permanent or temporary

Senge (1990) notes that, when asked what being part of a great team is like, people identify as the prominent feature the *meaningfulness* of the experience. Those who’ve been there, whether in business, sports, or other endeavors, acknowledge a feeling of “being part of something larger than themselves, of being connected and generative”; they frequently spend the remainder of their lives searching for a way to recapture that spirit.

The reality is that organizations spend the majority of their time in “survival” or “adaptive” learning mode. While essential, this

mode is insufficient to expand an organization's capacity to create its own future. To become able to do something not previously possible requires 'generative' learning – the capacity to create.

Senge maintains there are five dimensions (disciplines) within innovative learning organizations: personal mastery, mental models, building shared vision, team learning, and systems thinking. In his section on team learning, Senge notes that when teams are in a "team learning" mode, they not only produce exceptional results, but team members grow and learn faster than they otherwise would. According to Senge, the key to team learning is dialogue.

Senge observes that teams engaging in dialogue suspend assumptions and discover insights not attainable individually. In organizations, teams must achieve this state since they, not individuals, are the fundamental learning unit – if the team does not learn, the organization does not learn. That teams, rather than individuals, are the fundamental learning unit seems paradoxical. Yet, examples in learning organizations reveal that team intelligence exceeds the intelligence of individuals on the team; such teams "develop extraordinary capacities for coordinated action." Creating such situations should be one of your objectives.

Tiggeman and Sabel (1997) suggest this in asserting "the mechanisms by which learning can reduce time are numerous, and include factors such as process standardization, improved scheduling, work efficiency enhancement, fewer study layout changes, more effective data processing, and so forth. Learning is often the cumulative result of many small improvements rather than major breakthroughs and tends to vary depending on the amount of management attention devoted to capturing it."

Dad taught me that if you think like a cow, you won't need your rope much.

George Sicking

Most cowhands are forever practicing the art of roping...it's an occupational disease.

Fred Gibson

As long as the big outfits lasted, roping and riding and pistol practice were the hobbies of the cowboys.

Jesse James Benton

If you want to keep the herd moving, put your two best men on the point.

Oscar Thompson

The secret of success lies not in doing your own work, but in recognizing the right person to do it.

Andrew Carnegie

Summary

Hamel (2001), in a piece discussing the impact of the web on business, notes that "the Web's most profound impact will come not in the form of hyperefficient business processes but in a riotous explosion of new products, new services, new content, new companies, and new organizational forms." At the end of his article he states that "building the postindustrial organization is not primarily an IT problem. It's not a business-model problem. It is, instead, a problem of management systems, organizational structures, personal capabilities, and most of all, values. It is here that the epic task of building companies that are ready for the revolution must start."

Due to the web, in many ways, we have been collectively cast back into the "cattle drive" era. Successful organizations will be those that realize the importance of adapting rapidly to changing conditions, and that recognize responding too slowly to a threat could have dire consequences.

The threat is certainly there in the form of a technology shift that is redefining the fundamental business paradigm. Economic power shifts when this type of event occurs. A reordering of key players results from a rapid rate of innovation. Recent changes in technology are reshaping the research-development-production-distribution process. New patterns of economic activity are emerging, often originating from initial efforts to streamline internal operations.

Commercial organizations are in the midst of reorganizing business structures to optimize automation and innovation. An important aspect of this is *disintermediation*, the removal of middlemen from a process. Just as the web has increased the information available about consumer goods, shifting power to the consumer, so will the delivery of technology information from vendors to customers. The second stage, between in-house IT and in-house customer, will also be affected. As a consequence, we are finding that quality software technology and support that users can rapidly assess and access will be the software that is used in business-critical systems.

In between the celebrating that many did at the start and end of a cattle drive, the cowhands had long hours of hard, dusty work.

Wayne Gard

If we never had any storms, we couldn't appreciate the sunshine.

Dale Evans

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