Φ Pardalis Software, Inc.

A New Information Marketplace for the Beef Industry

A White Paper Introducing **ΦCommon Point Authoring™** and Its Capabilities

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Pardalis Software, Inc. – A New Information Marketplace for the Beef Industry

A New Information Marketplace for the Beef Industry

Introduction

Production supply chains depend on more than just goods, materials, and processes. They also depend on information. Information tells producers when to purchase, how to manage operations, whether costs are under control, and much more. Increasingly, information is seen as a commodity in its own right, the product of an *information supply chain*.

In the beef industry, the value of information has never been clearer. The United States Animal Identification Plan, Country of Origin Labeling, the recent U.S. case of bovine spongiform encephalopathy (BSE) – all speak to the value of accurate, traceable livestock information. Equally valuable, if less well covered in the news, is information about genetics, feeding, growth, health, yield, and other measures of quality.

As a beef producer, you know the value of your cattle and cattle products. But do you fully appreciate the value of the information you produce? Are you maximizing your revenues by treating cattle information as the marketable commodity it is?

Pardalis Software is committed to helping beef industry producers – cow-calf operators, sale barns, stockers, feedlots, and packers – do just that.

A patented new technology from Pardalis – **Common Point Authoring™**, or CPA – will provide producers throughout the beef industry supply chain with a new, low-cost means to own, exchange, and profit from the information they produce. Pardalis is now developing a solution based on CPA that creates a **New Information Marketplace** for the beef industry.

Regardless of the type or size of your operation, or the technologies you currently employ, the New Information Marketplace will empower you to:

- Increase your income by controlling and selling your information in an open market
- Know that your information transactions are always secure and private
- Achieve safety and quality goals with better information from suppliers and buyers
- Join an industry-wide marketplace with *no* cost for hardware or software

Like the cattle and beef you produce, your information has monetary value. In the New Information Marketplace, you and producers throughout the industry will be able to buy, sell, trade, and share that valuable commodity to improve your profitability.

The next few pages will look at the question of information in the beef industry and then describe the two core aspects of the Pardalis solution – its new low-cost, Internet-based communications model and the patented Common Point Authoring technology that will enable the New Information Marketplace and participating producers to thrive.

Information and the Beef Industry

The beef industry is changing radically, and as long as technologies like controlled genetics, electronic ID tagging, and computerized information management continue to boost efficiency and economy, the evolution will continue – or even accelerate. Despite these advances, open communication across the industry and corresponding improvements in safety and quality have yet to be attained.

The Fragmented Information Supply Chain

The U.S beef industry is a complex supply chain, stretching from coast to coast, handling over 100 million head of cattle annually, and including tens of thousands of cow-calf operators, sale barns, stockers, feedlots, and packers – not to mention grain producers, veterinary professionals, distributors, and other service providers who support the industry.

Because of this complexity, the beef information supply chain is fragmented, as illustrated in Figure 1. Information tends to move in small steps, across only one or two segments, and along narrow channels defined by established relationships. A feedlot, for example, might buy from – and exchange information with – the same few stocker-operators for years, never exploring potential opportunities that other producers might provide.
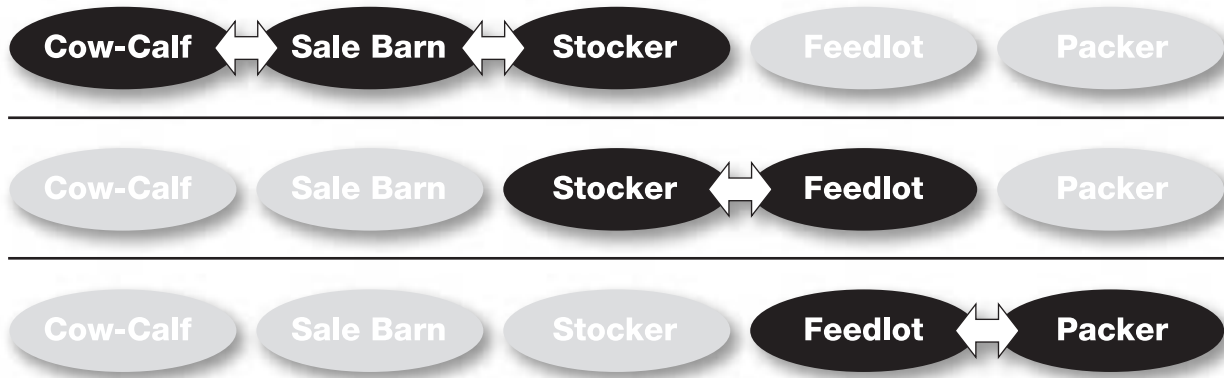
Figure 1. The Beef Industry's Fragmented Information Supply Chain

Compounding this fragmentation is the proliferation of computer systems. While any system will improve a producer's ability to manage his or her operation, the proprietary nature of hardware and software has raised barriers to communication. Incompatible data formats and protocols often create a need for new integration programs or more professional support, ultimately adding rather than cutting costs. In today's market, where pressure to maximize cattle health and quality is increasing, fragmented communication no longer does the job.

Connecting the Information Supply Chain

A connected information supply chain would provide significant benefit to the industry, allowing producers to communicate with potential new partners, develop new relationships, gain competitive advantage, and increase revenues. The New Information Marketplace creates such a connected chain, enabling the exchange of accurate, traceable, profitable information with many producers in multiple segments. Figure 2 illustrates one of many examples – in the connected Marketplace, any cow-calf operator, sale barn, stocker, or packer could also be the center of a communication hub.
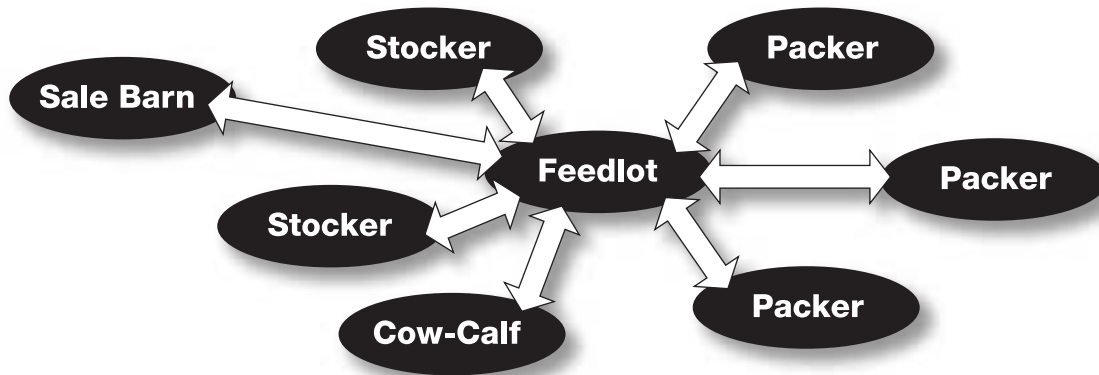
Figure 2. A Connected Information Supply Chain (Feedlot Example)

Two additional examples help demonstrate how a connected supply chain creates opportunity:

Grid Rankings and Quality Goals

Major meat packers rank carcasses according to quality and yield grade grids. Based on these rankings, packers set the prices they pay to the feedlots and influence prices paid to stockers and breeders. Yet many of the suppliers know nothing about rankings of individual cattle but only the rankings of the whole lots.

Grid pricing is an informational tool, and it stands to reason that its value will be maximized when the value of the information is maximized. That can happen when the grid information – in all its detail – is made available in a value-driven market. With detailed grid information available in the New Information Marketplace, feedlots or stockers can improve the marketability of their cattle by optimizing production and quality and sorting out lower performers before sale.

What Mad Cows Tell Us About Health Information

The case of BSE in Washington State is as much about the value of information as animal health. After discovery of the disease in a single cow, it took authorities several days to find the feedlot it came from, then several more days to trace the cow's point of origin via DNA testing. The USDA is still trying to track down other cattle from the premises that handled the infected cow.

With an active industry-wide information marketplace, reliable, verifiable information about source, health history, condition, even feeding history – associated directly with an animal's ID – will always be available and quickly traceable. Every producer with any stake in the diseased animal is already linked to the communication chain.

In the mad cow aftermath, the beef industry has an opportunity to control its own future. Cooperative, industry-controlled management of cattle information in a New Information Marketplace extending across international borders would be a significant step toward self-regulation and proactive compliance.

The New Information Marketplace

Pardalis's Common Point Authoring technology enables a new model for information exchange in the beef industry – the New Information Marketplace. Producers of any size will be able to join the marketplace without any expenditure for new systems. Money changes hands only when seller and buyer agree to exchange information, whether about herds or single animals. Most important, whoever produces information owns that information and controls its sale.

The "Book" on Every Bovine

The commodity in the New Information Marketplace is an authoritative "book," a collection of information tracing the history of each animal in a herd. Normally, information will be recorded for herds as a whole (directly from a chute-side scanning system, for example), though entries for individual animals are possible. Similarly, information can be shared at any level – from herd to individual animal.

Each producer who handles an animal authors his or her "chapter" with information of value in the marketplace – about source, ID, feeding, growth, immunization, yield grade, quality grade, etc. If there is a need to source an animal from origin to harvest, and the animal is sold three times, passing through four premises, its book will contain a minimum of four chapters – one by each producer-author. If end-to-end sourcing is not required, a producer might only sell his or her chapter to the animal's next owner.

All information is owned by the producer who authors it, and the producer-author has full rights to sell chapters, smaller pieces of information, or no information at all. Authors can also sell or assign rights to another producer.

Common Information Repository, Low-Cost Internet Access

The New Information Marketplace offers a new model for information exchange, designed specifically to eliminate costs for everyone who participates and provide them with an opportunity to thrive.

Pardalis will maintain a centralized data repository on behalf of participants where Marketplace information will reside. Authors and information buyers will access the repository via the Internet. An intuitive, lightweight web front-end will make the system easy to use and accessible even from slower computers or wireless devices. In partnership with other technology vendors serving the beef industry, Pardalis plans to offer other low-cost authoring and access alternatives as well.

In addition to maintaining information from across the industry, the scaleable Pardalis system will record, invoice, and track all information transactions.

Enhancing the Power of Existing Systems

Realizing that many producers have investments in technology systems and the information they contain, Pardalis has designed its system according to open standards. Pardalis servers will be compatible with existing ID and information management programs, and producers will be able to export data to the New Information Marketplace via standard protocols.

Moreover, producers will add value to and extend the capabilities of their existing systems by connecting them to the Marketplace – with no need to purchase new equipment, maintain new systems, or resolve compatibility issues.

Common Point Authoring: Own, Market, Trace

Linking the Food Chain: A Multi-Client Study
Sparks Companies, Inc., November 2002

Data protection will be important to a trace back initiative. Specifically, the initiative will require investment in the collection, maintenance and distribution of factual data on the 'who,' 'what' and 'where' of food origin, composition and handling. Protection of this data from unauthorized copying will encourage the data collectors to expend the effort and resources required to collect the data and maintain the database.

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For the first time, Common Point Authoring extends the concept of digital rights management (DRM) to authors and the authoring process.

Digital rights management is concerned with protecting intellectual property, in the form of digital information, by controlling permissions to buy, play, share, or use the information in other ways. Historically, DRM has focused on finished information – a recording in MP3 format, a market report from a financial analyst firm, a digital document available to subscribers, etc.

Common Point Authoring adds another level of protection, significantly more effective than password systems, assigning rights to multi-authored information at each stage of its creation – a need acutely felt in many fragmented information supply chains.

Ownership, Privacy, and Control

Rights-based authoring ensures that producers will digitally protect their part of the total information product – their "chapter" in the overall "book." This protection in turn secures ownership and guarantees control over sale and distribution. By means of authoring rights management, Common Point Authoring enables the New Information Marketplace, which is both open – everyone can participate – and secure – no one can participate without authorization.

In this marketplace, a stocker can author chapters on his beef cattle, sell them along with the cattle to fulfill a partner-feedlot's request for traceability information, offer them to new feedlots or packers as part of a business development effort, or sell them to cow-calf partners who need accurate information to measure the long-term performance of their cattle. Or the stocker can sell no information whatsoever, choosing to keep his records private.

Unalterable, Trustworthy Information

A critical characteristic of Common Point Authoring and the New Information Marketplace is the un-alterability of authored information. Once information is entered into the CPA system, it cannot be changed, even by its original author. Authors can, however, add supplementary information or comments that correct errors in earlier entries.

Whatever paths it takes in the New Information Marketplace, all information can be guaranteed to be authoritative and trustworthy.

Traceability

A key result of author-ownership and unalterable information is the ability to precisely trace verifiable information back to its source and forward to all its recipients. In the CPA system, books, chapters, and all informational elements are uniquely traceable.

Normally, tracing will only be possible by authors and others to whom authors assign appropriate rights; however, government authorities could trace information through the same judicial or administrative processes required to search any property.

A Technology for Industry Applications

On December 30, 2003, the United States Patent and Trademark Office issued a patent to Pardalis Software for its **Common Point Authoring** technology. A second, continuation patent for a CPA solution specifically for the livestock industry is now pending with the USPTO.

Common Point Authoring represents an evolutionary advance in the ownership and owner-controlled exchange of information and is broadly applicable to the management of digital information in many industries.

Common Language, Industry Standards

In complex information supply chains, there is inexorable pressure to standardize data types, formats, and authoring functions. The reason is simple. In such environments, lack of standardization hinders communication. Yet in the world of proprietary systems, efforts at standardization require substantial expenditures.

Pardalis's CPA technology changes the equation between standardization and cost. At the heart of CPA is a common vocabulary, common forms, and common database categories that all producers throughout the industry will be able to use from the outset. In addition, authors will drive the addition of new terms to the vocabulary as they are required.

Moreover, in the CPA system, standardization is driven by the entire marketplace, not by regulatory agencies or large companies with the leverage to make smaller businesses subscribe to their systems.

Conclusion: The Value You Gain

Common Point Authoring and the New Information Marketplace put an absolute premium on the ownership of information, the privacy of the producer-author, and the author's ability to sell his or her information at fair market value.

Through Common Point Authoring, Pardalis wants to empower cattlemen and others in the extended beef supply and demand chain to create a unified marketplace, managed by the industry itself, where trustworthy, traceable information becomes a commodity that generates real revenue for beef producers and prosperity throughout the industry.

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