



THE INSCAPE DATA CORPORATION NEWSLETTER

Empowering

...Your Wireless and Security Networks



NEWS & PRESS

Inscape Data and Talley Communications Corp. Announce Strategic Distribution Partnership

Inscape Data Corporation is pleased to announce that it is in strategic partnership with Talley Communications for the distribution of its video surveillance products.

Talley is a highly respected valued-added distributor of wireless communication products, encompassing a strong nationwide customer base. Inscape Data and Talley have just finalized their Strategic Distribution Agreement to introduce this important distribution partnership in North America.

David D. Lin, President of Inscape Data says, "I am extremely excited about this relationship. With their distribution acumen and strong technical support capabilities, they are well placed to present and sell high volumes of our products to their customer base. I am confident that our growing

relationship with Talley will yield long-term benefits to both our companies and the markets."

With this agreement, Talley will gain an innovative, cost-effective and high quality source of supplies for its video security systems and network video accessories. Inscape Data will provide Talley with essential product training, engineering support, technology updates, new product samples and joint marketing campaigns.

Vice President Jeff Talley states, "Talley believes strongly in the video surveillance products manufactured by Inscape Data, as well as its multiple echelons of value-added services, specifically in the area of network system design and support. The Inscape Data AirGoggle™ product line will benefit our reseller and systems integrator customers, and will generate strong market growth for Talley within the next

few years."

"According to a market research report by *In-Stat* in June 2003, the wireless and video surveillance product shipments worldwide will grow from 24 million units in 2003 to more than 62 million units in 2007. Such staggering growth will fuel the enormous demand for the wireless and video surveillance solutions that we offer," notes David D. Lin.

Talley Communications Corp. is a leading distributor of wireless communication infrastructure and mobile products. Talley's corporate offices are in Los Angeles, CA, with facilities in Phoenix, San Francisco, Kansas City, and Seattle. Talley was founded in 1983, and is a privately held company. www.talleycom.com



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Inscape Data Unveils New Website

As demand for Inscape Data's products increase, so has the need for a feature-rich website. Inscape Data is pleased to unveil its revamped website at www.inscapedata.com.

Our vision was to design a site which would provide optimal

website tools for our distributors and our customers.

We believe we have achieved this goal based on the new site's convenient layout, easily accessible links to various pages, and special login pages for our distributors that contain exclusive

marketing information tailored to each specific distributor.

The newly released corporate website offers several convenient and friendly features to Inscape Data's distributors, resellers and end users. For each distributor, *(Continued on page 2)*

SUCCESS STORES

RV Park Applications: Peridot Corporation

I attended Inscape Data's Professional Product Training Certification because I needed the in-depth knowledge Inscape Data was offering, rather than just a superficial understanding of the products.

Since attending the certification, I now feel that I have obtained the necessary information I was seeking regarding wireless internet and network video products.

After reviewing competing products, I have concluded that Inscape Data offers the best quality and performance ratio in comparison to other products on the market. This has led me

to select Inscape Data as my primary wireless supplier.

I am extremely satisfied with the AirEther™ AP11 I have purchased, as well as with Inscape Data's services overall. The unique IP68 weatherproof enclosures are great and their technical support is phenomenal. I am eager to purchase and utilize more Inscape Data products in the future, and would definitely recommend that other companies buy these products.

-James A. Jeltema, President
Peridot Corporation
www.peridotus.com

Remote Caribbean Deployment: Scadax in St. Lucia

Purchasing Inscape Data's AirEther™ AP11 through Streakwave has been a very positive experience for me. The installation and startup of the system was very quick and easy, with expected wireless signal coverage.

Inscape Data's Sr. System Engineer, Richard Ho, provided accurate and timely technical support for standard operational questions, as well as providing some schematics and other specific information for some technical questions that would

be considered non-standard. I will definitely be using both the AirEther™ 802.11 products, as well as the AirGoggle™ line of cameras for future projects.

Although my expectations tend to be fairly high, I feel that Inscape Data met them adequately, and I have been very pleased with the performance of Inscape Data's products and services.

-Howard Jampolsky, Owner
Scadax of Vancouver Canada
www.scadax.com

"[The Inscape Data CB11s] have allowed me to give service to people with little to no line of sight,"

-Lynn Leonhard, President of Shoreline Wireless

Line of Sight Solutions: Shoreline Wireless

Streakwave is the only wireless vendor I use and trust to supply all my business needs. Carl has been a terrific help and is now my highly trusted friend in the wireless community.

The Inscape Data AirEther™ CB11s that I purchased from Streakwave are working better than I could have hoped for. They have allowed me to give service to people with little to no line of sight, which is something I could not have done in the past. They have made me look at community rollouts differently, saving me

the need for additional access points and thereby adding to my bottom line.

The overall performance of the CB11s are truly superb; the 200mW with a 9dBi internal antenna makes for a small yet very potent client premise radio. I have already put in a purchase order for 20 more CB11s, and I look forward to using other Inscape Data products in the future.

-Lynn Leonhard, President
Shoreline Wireless
www.shorelinewireless.com



Inscape Data's AirEther™ AP11s bring Internet access to remote sites in the Caribbean and RV Parks

Inscape Data Unveils New Website (Continued from page 1)

there is an exclusive web page, login name, and password. Within this online access and provision, our distributors will be able to work more productively with Inscape Data in the areas of marketing, sales, and customer service. For resellers and end users, we provide an online newsletter subscription service, online reseller enrollment, and online contact us pages. These friendly and convenient online features will minimize the hassles of unwanted communication

processes and will provide the best customer service and communication possible.

The new site features a live video demo that allows distributors and resellers to offer their customers demos of real-time streaming audio and video. In addition, we have added a new products section so that customers can see the latest technology from Inscape Data.

So come check out the new site at www.inscapedata.com— we look forward to your visit!

TECHNOLOGY CORNER

Network Video Security Systems and MPEG4 Compression Technology

March 2005

Inscape Data's AirGoggle™ video security systems are based on the MPEG-4 (Motion Picture Experts Group) multimedia standard. The MPEG-4 multimedia standard is an advanced video and audio compression technology that allows users to create, deliver, and consume audio-visual content in various qualities for various devices. This is the only advanced multimedia compression technology in the industry available recently for developing the most bandwidth-efficient video systems.

Inscape Data has adopted MPEG-4 compression

technology to offer the most bandwidth-efficient and highest quality digital video security solutions available on the market. In this article, we will provide you with an overview of MPEG-4 compression technology and why MPEG-4 is superior to those video products currently using MJPEG (Motion Joint Photographic Experts Group) compression technology.

First, MPEG-4 is an open standard, representing thousands of man-years of work shared by hundreds of companies. No single company can hope to match the technical and intellectual resources of an entire competitive market. No other technology has the potential to become as deeply

developed and widely supported by multiple industries, vendors and service providers, and to be trusted by end users with their video and multimedia needs.

It is the only open standard that can address the opportunities enabled by the digital revolution: to easily deploy multimedia content for any and all platforms.

MPEG-4 dramatically advances audio and video compression, enabling the distribution of content and services from low bandwidths to high-definition quality across broadcast, broadband, wireless and packaged media. MPEG-4 builds on the proven success of three fields:

- Digital television
- Interactive graphics applications (synthetic content)
- Interactive multimedia (World Wide Web, distribution of and access to content)

Next, **Motion JPEG** or **MJPEG** based on **JPEG** Joint Photographic Experts Group (ISO/IEC 10918) and JPEG is the compression standard to achieve high quality for still images, but is not used for video compression. JPEG's major advantage is that the software for decompression (and viewing) of

(Continued on page 4)

Fig. 1: MPEG-4 Video Comparison Table

		MPEG-4	JPEG / M-JPEG	
Basic compression scheme		Moving Video Compression	Still Video Compression	
Compression Ratio		100: 1	10: 1	
File Size	Per Frame	2 KB/Frame	20 KB/Frame	
	(30 Frame/sec)	60 KB/sec (480kbps)	600 KB/sec	
	(10 Frame/sec)	20 KB/sec (160kbps)	200 KB/sec	
Frames/sec	Modem (33.6Kbps)	2	0.2	
	ADSL (384Kbps)	24	2.4	
	Cable Modem (500Kbps)	30	4	
	Leased Line	256Kbps	16	1.6
		512Kbps	30	3 to 4
		T1 (1.544Mbps)	30	10
LAN-Internet (10Mbps)	30	30		
Simultaneous Users	10 fps, T1 (1.544Mbps)	9 to 10	1	
	10 fps, LAN (10Mbps)	62	6	
	5 fps, T1 (1.544Mbps)	18 to 20	2	
	5 fps, LAN (10Mbps)	100	12	

FEATURED PRODUCTS

Inscape Data Announces Release of the New AirEtherä CB1118

The AirEther™ CB1118 Client Bridge CPE is designed for WISPs who require a longer wireless distance between their subscribers and the closest wireless base station, such as 5 miles or greater.

The CB1118 is integrated with an 18dBi patch antenna that can achieve the greater distance of wireless communications. The 18dBi patch antenna is a high-gain directional antenna with very low return loss (VSWR), <math>< 1.5:1</math>.

The CB1118 shares a similar hardware platform as the CB11 and offers 200mW transmit power. Along with the high gain antenna, the CB1118 offers a total of 41dBm EIRP for extended distance wireless CPE applications.

In addition, the CB1118 is built

with a weatherproof IP67 certified enclosure with watertight connectors, allowing WISPs to deploy carrier class wireless services.

Inscape Data is proud to deliver the CB1118 to the WISP market as an addition to the popular CB11 Client Bridge CPE. The CB1118 is currently being field tested, and is scheduled for release in March 2005 for customer deliveries.



**Introducing the new
AirEtherä CB1118**



**The NVC Professional Network
Video Camera Series Utilizes
MPEG-4 Video Compression
Technology**

MPEG Compression Technology (Continued from page 3)

images is included on any standard PC and web browser. Based on JPEG, MJPEG creates a digital video sequence from a series of JPEG images.

JPEG/MJPEG are most appropriate when only single images are required to document a specific event such as when somebody passes through a door, or for quality control monitoring of products. It is also a favorable format when bandwidth cannot be guaranteed. This is the most frequently used standard in the industry today.

The main objective of the video compression techniques

UPCOMING EVENTS

2005 Trade Show Circuit

- **WISPCON VII**
March 20-22, 2005
Baltimore, MD

- **ISC West**
BOOTH# 24074
April 6-8, 2005
Las Vegas, NV

- **ISPCON Spring 2005**
May 24-26, 2005
Baltimore, MD

For more information about Inscape Data's upcoming trade shows and other events, visit www.inscapedata.com/events.htm



WISPCON VII
Baltimore, Maryland 2005



used in network communications is to reduce invisible details to achieve compression and reduce hard disk consumption and network bandwidth demands. There are three key factors in determining which can be the most appropriate compression method for video communications including:

1. What is the compression ratio?
2. What is the network bandwidth consumption in terms of file size and frame per second?
3. How many simultaneous users can be supported?

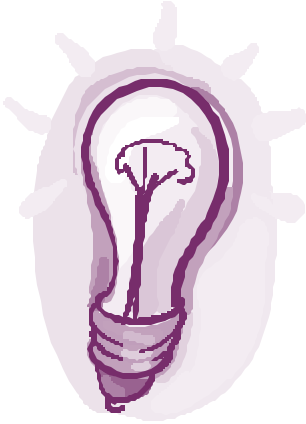
Based on these three key factors, the table on the previous page illustrates the

comparison between MPEG-4 and JPEG/M-JPEG.

Based on the comparison table Fig. 1 on p. 3, MPEG-4 video compression is at least 10 TIMES more efficient, in terms of file size, network bandwidth usage and simultaneous network users, when compared to Motion JPEG (M-JPEG). The MPEG-4 video compression technology is the choice for developing the most efficient network video products. Inscape Data's AirGoggle™ video security products offer the most cost-effective and network efficient video surveillance camera and server solutions in the video security market.

HELP DESK & WIRELESS/NETWORK VIDEO EDUCATION

Professional MPEG-4 Camera Bandwidth and Video Storage Planning



**Sr. System Engineer
Richard Ho educates us
on wireless and network
video products**

With the advent of MPEG-4 camera systems, efficient real-time motion video streaming is now possible. Vibrant, colorful motion at 30 frames per second 640x480 video is now a reality over Category V Ethernet cables. This means the migration of CCTV cameras to IP addressable network cameras will save on usage of hundreds of dedicated coaxial video and audio cables in a large installation. Thanks to MPEG-4 video streaming technology, what was once only a concept is now a reality.

Planning

One may use the MPEG-4 camera's video and audio encoding rate as a benchmark for bandwidth planning. To account for bandwidth usage per camera, use the video encoding rate as a data transmit rate. This way, you

can plan for the maximum data rate needed and not short-change the MPEG-4 video stream. The stream might not utilize all of the bandwidth allocated, but you'll be ready when the video stream needs it. To plan for hard drive storage needs, the method is similar. Use the video encoding rate in kilobits-per-second and multiply by the length of time needed for the video recording. You will then have your video storage capacity requirement for the encoding rate and length of time specified. Don't forget to convert bits to bytes when shopping for hard drives.

Example

Given the MPEG-4 camera encoding rate of 256 kbps, what is the bandwidth requirement and 24-hour video storage needs to stream this camera? The bandwidth required is

256kbps and the storage need is 256kbps times 24 hours (86400 seconds), which is approximately 2.7GB of storage space. If it were 7 days of storage, we take 2.7GB x 7 = 18.9GB.

In the above example, a 256 kbps DSL line can provide quality MPEG-4 30 frames per second of video streaming and recording. I would consider this to be very bandwidth friendly.

Planning ahead is the key for deploying solid network video cameras and servers. Never short-change your video stream and always provide more bandwidth than needed.

-Richard Ho,
Sr. System Engineer
Inscape Data Corporation

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Inscape Data Corporation

Inscape Data is an industry leader in wireless communication and network video surveillance systems. We offer a full suite of product lines, including our AirEther™ IEEE 802.11a/b/g Wireless Systems with IP67 and IP68 certified all-weather enclosures, a broad selection of 2.4GHz antennas, and our AirGoggle™ Network Video Security Systems based on MPEG-4 video compression standards.

With strong, dependable, and proven manufacturing capabilities in Taiwan, Inscape Data is committed to delivering products that provide differentiated value to its customers and partners worldwide. Inscape Data looks forward to developing and introducing cutting-edge and unique technology solutions to the marketplace in the future.

InscapeData

"Empowering Your Wireless and Security Networks"