



Page of Enlitenment

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The Enliten Management Group
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Industry News and Information for users of satellite-based business television and interactive distance learning networks.

Featuring:

Safeway Inc. Goes IP – AGAIN!

Leading Edge! Safeway Blazes the Trail for Next-Gen!

Streaming, Video-on-Demand, IP Multicasting – Need Help, Understanding?

IP Multicasting Solutions for the Enterprise

Thoughts & Perspectives from a Leading Manufacturer – International Datacasting Corp.

Ad-Hoc, Special Event Videoconferencing (SEV) is Alive & Well!

The next issue of POE will be a Special Edition of “Success Stories” & Costing Information!

Get an overview of the Industry. Know who is doing what, with what and for whom.

Enliten can bring you up-to-date quickly, saving you a great deal of time and effort.

See below, column left, for more details.



Dan Pryor - Safeway

Dan Pryor is the Vice President of Corporate Communications and Media Production for Safeway Inc. The position reports to the Executive Vice President of Operations. Dan has been with Safeway for over 16 years and is responsible for developing and executing the company's communication strategy. He manages four departments: Broadcast Production, Video Production, Web Administration and Satellite Support.

The Broadcast Production group manages the facilities from which the programming originates.

Safeway Inc. Goes IP – AGAIN! Leading Edge! Safeway Blazes the Trail for Next-Gen!



Safeway Inc. is a food and drug retailer, which operates about 1,800 stores throughout the United States, and in western Canada, under the names of: Safeway, Pak n' Save Foods, Vons, Pavilions, Carrs, Randalls, Tom Thumb, Genuardi's Family Markets and the trademarks Safeway SELECT, Lucerne and Mrs. Wright's.

IP Multicasting Solutions for the Enterprise - Thoughts & Perspectives from International Datacasting Corp.

Confused about streaming, Video-on-Demand (VOD), IP Multicasting? You're not alone. We've found a wide range of understanding and misperceptions about these topics, throughout our client base, especially when engaging with representatives of their various departments. That's okay! We enjoy the challenge to bring guidance and clarity to the situation.

We spend a great deal of time working with the industry suppliers (manufacturers & service providers) to know and understand who's doing what, how and why. It prepares us, so that we can help you. The following is the second in our series of IP Multicasting Solutions for the Enterprise, featuring the Thoughts & Perspectives of Ron Clifton, President and CEO of International

including three studios and 24 two-way conferencing rooms, as well as Safeway's network-wide One Touch IDL system. The Video Production group produces all of the company's internal communication, training and marketing videos: over 100 projects each year. The Satellite Support group manages the 1,800-downlink sites. The Web Administration group manages the internal company portal and content management systems.

Dan is an active member in Communications Media Mgt Association (CMMA) and BTV Link (an industry user-based organization).

Dan is a graduate of the University of CA, San Diego, with a bachelor's degree in Media and minors in Economics and Psychology.

Studio & Production Capabilities

Safeway maintains three fully automated studios, which are designed for one person to manage the program productions, in addition to the on-camera talent.



The main studio and production center (including the company's conference center, which is adjacent to the studio) features three automated cameras with Vinton robotic heads, an ECHOLab 5500 digital video production switcher and the ECHOLab Commander, which features built-in script and one-command control. The Commander includes:

Led by Dan Pryor, Safeway recently rolled out its second IP multicasting technology throughout its satellite video network. Dan was responsible for this technology selection, much as he was 4 years ago, when Safeway deployed its first "Next Generation" solution.

Why should Dan and the Safeway experiences be of interest to you? Well, as an industry veteran and early adopter, we find Dan to be quite qualified to discuss the delivery of video and multimedia applications via IP over satellite, and his thoughts and perspectives to be of great value to other enterprises.

Here's the story of the Safeway Satellite Network and IP multicasting....thanks Dan:

The Safeway Network – Overview

Safeway Inc. is in the highly competitive grocery business, where margins are known to be low, employee turnover is typically quite high and any number of outside variables could have a significant impact on the success of the company. As a result, training and corporate communications are critical to the success of the company, for which, the Safeway Satellite Network plays a significant role.

Dan, and his team of 15 people in the Corporate Communications & Media Production department (plus 6 satellite support people) produce an ambitious 30 hours of original programming each week. Approximately 40% of the content is training and the other 60% is for communications. About 50 to 60 percent of the company's training is done via its satellite network. The rest is provided in-person (stand-up) and by CBT. Dan and his team support the Human Resources Development (HRD) personnel who develop programming content, and the senior executives who present the material. According to Dan, "This is an essential aspect to the success of the network...that the senior executives are the trainers. They are more knowledgeable on the subject matter and their involvement/presence pretty much demands the respect and attention from the participants."

Datacasting Corporation (IDC).



Ron Clifton – IDC

Ron Clifton (MAsc, Peng), described as a "turnaround artist" by the Ottawa Citizen, is a systems engineer by trade and high-tech CEO by vocation. Since joining International Datacasting Corporation (IDC) as President and CEO in late 1997 he has led the company from revenues of \$4.7M and a loss situation (in '97) to more than \$23M in revenues ('01), and grown IDC into a "networking superstar" (according to *Via Satellite* magazine).

Prior to joining IDC Ron was President and CEO of Senstar Corporation – a Daimler Benz Aerospace company – growing it into profitability with operations in US, UK, Mexico and Germany. Before that he was General Manager of Zenon Environmental Systems, Inc. – leading international expansion and helping to take the company public in 1996. Previously Ron was with Computing Devices Corporation – as Manager New Product Development and later Director of Surveillance Systems Division. While with CDC, Ron was seconded to Hughes Aircraft Company in California for two years.

Memberships/recognition: Elected to Executive Committee, IEEE Carnahan Conference since 1996, appointed member Canadian NATO Industrial Advisory Group, awarded two patents (1983 and 1996), honorary Kentucky Colonel, Warden of Calling of an Engineer (the Iron Ring ceremony), for Ottawa and Carleton Universities. Ron has a bachelor's degree in Electrical Engineering and a master's degree in Electrical Engineering from the University of Waterloo, Canada.

ENLITEN: What is your perspective of where the industry is today?

built in character generator (CG), electronic still store, Ultimatte and DPS Reality Digital Disk Recorder (DDR). So, just what exactly does this mean? By hitting one button, the technical director is able to execute the pre-built commands, such as:

- Fade up from black
- Roll the program into tape
- Switch to the studio camera
- Bring up a lower-third CG
- And cue the talent



For audio, Safeway has an Allen & Heath 24 channel mixer. AMX remote control units allow instructors to do their own switching in all three of the Safeway studios. The AMX unit in the main studio has touch screen control. Field production is mastered on Betacam SP standard definition. Safeway's editorial work is finished on an Avid Media Composer (which has over a Terabyte of storage) and final edit masters go to Digital Betacam. Dan did indicate that Safeway might migrate to Sony's new Optical Disk format next year.

Also, programming originates from Safeway's two Interactive Distance Learning (IDL) studios that feature the One Touch interactive system. The One Touch system includes four keypads and its Front Row Desktop Client on one PC at every store. Front Row is used for confidential programs to the store managers. The One Touch system provides information back to Safeway, indicating and confirming which individuals have watched the required programs. According to Dan, "Accountability

There are four departments that report to Dan: Broadcast Production, Video Production, Web Administration and Satellite Support.

- The Broadcast Production group is responsible for all broadcast content and manages the company's three studios. There are 13 Division offices that can originate a live broadcast to any cross section of stores or facilities. The group also manages the One Touch IDL system that has over 8,000 keypads distributed over the 1,800 store locations as well as 2,000 FrontRow PC users.



- The Video Production group is responsible for producing all of the company's internal videos for communication, training and marketing. They produce over 100 projects each year. They employ producers and production assistants while outsourcing writing and production jobs to freelancers.



- The Web Administration group is responsible for managing the internal company portal and content management systems. They train all content publishers and develop the web standards for the business. They conduct usability studies and analyze web page viewing by store departments. They also manage a variety of web-based tools to help streamline business functions.
- The Satellite Support group manages the 1,800-downlink sites and serves

RON: The industry today is in the process of maturing. This is an emerging market that did not exist five years ago. With the current economy and telecom market shakeout, we are seeing a "speed bump" in what is otherwise a high-growth market with lots of pent-up demand waiting for recovery. We had a number of new entrants into our industry when the dot.com era was at its peak, but they lacked satellite experience or staying power, these have mostly fallen by the wayside – it's been a case of "survival of the fittest."

ENLITEN: What is the most significant development regarding the delivery of video and multimedia for the enterprise in the past year?

RON: This is proven technology and we are already into second and third generation products. From our point of view, the major recent development has been a transition in the customer community—from the first wave of satellite savvy early adopters to a new wave of non-traditional users. These new users are discovering that not only do satellite systems essentially "plug and play" with their traditional wireline networks, they also represent a significantly more cost-effective solution for point-to-multipoint distribution of broadband content.

ENLITEN: How well are satellite-based IP multicasting technologies gaining a foothold in the enterprise?

RON: The track record for satellite-based IP multicasting solutions in enterprise applications is excellent. Performance—especially for streaming media applications—has been outstanding.

An industry that has traditionally been dominated by MPEG2 BTV applications, is now modernizing and converting to IP-based file and streaming content delivery in configurations that include desktop solutions as well as hybrid data and video network configurations.

This migration is still in its early days, we have just begun to address the "tip of the iceberg" in enterprise applications. Now the challenge is to educate the enterprise IT/MIS community so they understand

is an important element of Safeway's IDL network."

Both of the One Touch desks have AMX flat panel controls with buttons for:

1. Camera 1
2. PowerPoint
3. Forward PowerPoint
4. Reverse PowerPoint
5. Camera 3 (transition/center camera)



Recently, Safeway purchased One Touch On-Demand servers for each store, enabling employees to log in via the browser and access content on-demand.

Lastly, but equally important, Safeway originates meetings and programming from the two-way videoconference rooms at its 13 Division offices and turns the program signals around into its dedicated uplink. Each division does about two to three programs per week. In total, Safeway maintains 24 two-way conference rooms and its own Accord Conferencing Bridge in Salt Lake City. By converting to a dedicated IP network and managing its own bridge, Safeway was able to eliminate all of the variable costs out of network...saving hundreds of thousands of dollars per year.



as a call center for encryption issues. They also support the Cisco IPTV clients, One Touch Site Controllers/Keypads and the Company's 22 video conferencing sites and the Accord Conferencing Bridge.



➤ The Satellite Network's five-person help desk is located in Salt Lake City at the company's Data Center, which is responsible for all video and data delivery systems and applications. In-store representatives provide all first and second level maintenance and repair services, including the swap out and/or installation of satellite receivers and display equipment.

Early Adopter – Leading Edge w/Viacast

Safeway and Dan have a history of being on the leading edge of new, "Next Generation" technologies for their satellite-based business television network. They were early adopters of compressed digital video and channelized space segment, with the CLI SpectrumSaver system.

Safeway was one of the first and few enterprise organizations to fully embrace the "Next Generation" IP multicasting technologies. According to Dan, "We canvassed the industry, looking for the best IP solution." He continued, "We thoroughly evaluated all of the viable receivers that were available at that time, selecting a receiver and over-all solution provided by ViaCast."

The ViaCast solution included encapsulators, multiplexers, encoders and conditional access.

Based on a close, working relationship with the Safeway IS department, Dan was able to integrate his network into the stores' local area networks (LANs).

that satellite-based IP multicasting is proven and cost-effective.

Fortunately, with the wealth of successful installations (and therefore easy references) in the past four or five years, word-of-mouth is spreading and this is becoming much easier.

ENLITEN: What impact has the Internet had on the enterprise market regarding the delivery of video and multimedia?

RON: The Internet is simply not viable as a broadcast network for streaming video or other multimedia, particularly for enterprise applications. Apart from that limitation, as we all know the Internet (and IP, the Internet Protocol) has had a profound effect on the enterprise market. The ease of access and interoperability has meant that an increasing percentage of business applications are IP based and Internet connected.

Even though streaming video to the desktop hasn't been a big success, the evolution of industry standard formats and the availability of a variety of multimedia players have led to the popularity of file-based video and multimedia for non-real time applications. Distribution via Internet is viable for smaller files and for point-to-point/point-to-fewpoint networks where transfer time and bandwidth costs are not critical factors.

Bottom line? The Internet has raised expectations but has not been able to deliver.

ENLITEN: Your thoughts about satellite-based networks versus delivery via the Internet?

RON: Satellite is inherently most cost-effective for broadcast applications. It significantly outperforms terrestrial Internet delivery for streaming video and multimedia every time, and it adds the extra benefit of secure content delivery. This is an issue for enterprise networks and a growing number of applications.

IP multicasting via satellite has only become possible in the past few years, basically since open standard/IP-interoperable DVB has become the

Tradeshows & Conferences

Retail Systems 2003/VICS Collaborative Commerce

June 9-12, 2003
McCormick Place
Chicago, IL
www.retailsystems.com

Satellite Internet Forum

June 17-19, 2003
Renaissance Hotel
Washington, D.C.
www.actconferences.com

DV EXPO East: 2003

Jacob K. Javitz Center
New York, NY
July 7-11, 2003
www.dvexpo.com/east

Content World

Global Conference & Exposition
Hyatt Regency, Los Angeles, CA
October 7-9, 2003
www.contentworld.com

Industry Related Publications

Satellite Publications

Via Satellite
www.viasatellite.com

Training Publications

e-Learning
www.elearningmag.com

Training
www.trainingmag.com

Video Production/Systems Publications

AV Multimedia Producer
www.avvmmp.com

Broadcast Engineering
www.broadcastengineering.com

Government Video
www.governmentvideo.com

Millimeter
www.millimeter.com

Presentations
www.presentations.com

Video Systems
www.videosystems.com

Cisco products were built into the network, including its LAN management system. Cisco IP/TV control and broadcast servers provided Video-on-Demand (VOD) capabilities.

“At the outset, the IS network guys were against having streaming of any type on their network. The issue was that they didn’t have switches at facilities.” Dan continued, “The solution was to include switches into the systems at the stores, going to each of their three PCs. This would allow them to manage and isolate LAN activity. It represented a BIG win for both the Satellite Network and the IS department.”

The system performed well for Safeway over the next few years. As per Dan, “We were quite pleased with ViaCast and the way we were able to integrate it with Cisco IP/TV to give us a well-rounded solution. Overall, we had a system, which met our training and communications needs. It was excellent for providing feedback via the company’s terrestrial connection.”

During this period, other enterprise organizations considered IP solutions. A number of them went through extensive evaluations. Unfortunately, the economy went south, budgets were cut and very few were in the position to deploy or upgrade their networks to IP.



Solution Search - Again

Last year, a handful of new satellite-based IP networks went online for the delivery of video and multimedia applications, virtually doubling the number of enterprise networks. However, this still represented only a small number. At the same time, Dan found himself in the position of needing to find Safeway’s next “Next Generation” solution.

industry standard for multimedia satellite datacasting networks. Satellite multicasting is essentially “one-hop” delivery with guaranteed Quality of Service to users behind the firewall in enterprise applications.

The only way to equal the performance of satellite delivery with terrestrial networks is by using dedicated broadband fiber networks (Intranets and WANs/VPNs) and these become prohibitively expensive for multipoint broadcast configurations.

Having said all that – satellite and Internet technologies are interoperable, not counterposed. The Internet provides an excellent connection for low-bandwidth tasks such as confirmed delivery and content requests (e.g., content on demand).

ENLITEN: What is your company doing to develop the “right” technology(ies)/solutions for the enterprise market?

RON: Because we are a relatively small, technology-driven company that is focused on satellite IP multicasting, we are able to be especially responsive to customer requirements. We consider ourselves technology partners for our customers. We work closely with them, and this informs our R&D and product evolution. It’s one of the reasons we have been first to market with many of the key innovations in this industry.

IDC has been in business since 1984 and comes from the satellite industry originally – specifically with years of lower bandwidth broadcast experience. We leveraged this experience into the broadband arena and have “grown up” with the Internet and are industry leaders in the transition from proprietary “switched circuit [SCPC]” to open standard “packet switched IP [MCPC]” networks.

Last fall we released our latest generation of advanced satellite router and multimedia server appliances, and new datacast content delivery software. This is a third generation product evolution for us. What used to require an edge receiver and a separate computer is now bundled into a single Linux-based

Organizations & Associations

Communications Media Management Association
www.cmma.net

Government Education and Training Network-
Distance Learning through Interactive Television
getn.govdli.org

Federal Government Distance Learning Association
www.fgdla.org

Society of Satellite Professionals International
www.sspi.org

Teletraining Institute
www.teletrain.com

United States Distance Learning Association
www.usdla.org



PoE Funnies

Letter to the Editor

Dear PoE,

I have a small problem. I have two brothers. One works in business television; the other is serving a 30 year prison sentence. My mother ran off with the milkman when I was three. My sister's a prostitute, and my father is an exhibitionist. Recently I met a girl who just returned to earth after being abducted by aliens. I want to marry this girl, but my problem is that if I marry her, should I tell her about my brother who is in BTV?

-Conflicted

Safeway's existing provider, ViaCast, was a victim of the difficult economic times and unable to support Safeway's future requirements. Hence, the search convened. According to Dan: "This time around, we found a wider selection of companies and IP products. However, we still faced the challenge of finding the right receiver/system and company to fit our needs."

Today's Challenge: 2003

Dan and his department identified a number of the company's business challenges they needed to meet, including: training requirements (due to high turnover of personnel); provide revenue opportunities via in-store advertising; and address issues and communications needs regarding the company's union situation. Many of the challenges were the same as with previous technology upgrades... reasons, which have historically justified the cost of Safeway's satellite network. That being the case, the main Company Objectives for Dan to meet were:

1. Employee education and use of best practices through video training
2. Enable on-demand capabilities to video display
3. Improve labor relations through better corporate communications
4. Reduce costs of delivering training and corporate communications
5. Increase sales through Point-of-Sale (POS) displays (future objective)

In addition, Dan had to assure that the Satellite Video Network was:

1. Able to use the current bandwidth and leverage its investment
2. Capable of future expansion
3. Capable of carrying business data as redundant back-up to data WAN
4. Easily accessible and upgradeable

unit capable of a wide range of kiosk and network configurations.

ENLITEN: Do you provide both terrestrial and satellite solutions?

RON: Yes – our SuperFlex satellite solution is fully interoperable with a variety of terrestrial and other network topographies, including the Internet. We have a lot of experience with integrated networks that combine the best features of both technologies and customers come looking for us because of this "plug and play" expertise.

In addition, through our wholly-owned subsidiary, Storm Internet, we offer "last mile" solutions via a broadband terrestrial wireless technology called Webwalker – designed to work stand-alone or integrated with satellite for rural/non-urban applications.

We are unique in the industry in being able to provide a complete end-to-end broadband wireless solution that includes the satellite "first 1,000 miles" and the terrestrial wireless "last mile" connection.

ENLITEN: Who do you see leading the movement toward IP multicasting (what vertical industries – end-users)?

RON: We have seen the Internet drive IP multicasting applications such as edge caching and streaming. This process has slowed down somewhat as funding for broadband Internet media business ventures dries up.

Enterprise networks have been strong for us, especially those that require high speed secure delivery—for example multimedia news, weather and other information services.

Distance learning has also been one of the prime drivers of satellite-based IP multicasting applications. The pervasiveness of interactive computer-based training and asynchronous learning means that there is a growing demand for broadband multimedia content. The older MPEG2 video/BTV type model is passive in nature, not IP friendly and much too expensive.

Better late than never, but here's a couple of famous April Fools Day Hoaxes:

Internet Spring Cleaning

In 1997 an email message spread throughout the world announcing that the internet would be shut down for cleaning for twenty-four hours from March 31 until April 2. This cleaning was said to be necessary to clear out the "electronic flotsam and jetsam" that had accumulated in the network. Dead email and inactive ftp, www, and gopher sites would be purged. The cleaning would be done by "five very powerful Japanese-built multi-lingual Internet-crawling robots (Toshiba ML-2274) situated around the world." During this period, users were warned to disconnect all devices from the internet. The message supposedly originated from the "Interconnected Network Maintenance Staff, Main Branch, Massachusetts Institute of Technology." This joke was an updated version of an old joke that used to be told about the phone system. For many years, gullible phone customers had been warned that the phone systems would be cleaned on April Fool's Day. They were cautioned to place plastic bags over the ends of the phone to catch the dust that might be blown out of the phone lines during this period.

Chunnel Blunder

In 1990 the *News of the World* reported that the Chunnel project, which was already suffering from huge cost overruns, would face another big additional expense caused by a colossal engineering blunder. Apparently the two halves of the tunnel, being built simultaneously from the coasts of France and England, would miss each other by 14 feet. The error was attributed to the fact that French engineers had insisted on using metric specifications in their blueprints. The mistake would reportedly cost \$14 billion to fix.

Concerns & Key Issues

Dan identified a number of concerns, as well as wish list items, that needed to be addressed during the search. Based on prior experience, he was particularly concerned with the stability of the manufacturer(s). Following is a partial list, in no specific order:

- The manufacturer must be responsible and accountable for the whole satellite system versus merely private labeling.
- Complete system integration and compatibility, from the head-end all the way through the back-end, including Cisco's IP/TV elements.
- Size and stability of company. With the ever-changing environment, it's difficult to know which companies, and their respective products will be around and supported through the life of the network.
- Electronic Program Guide (EPG) capabilities. What's available on-demand?
- Live viewing on TV monitors and streaming to the desktop, in addition to video-on-demand (VOD) capabilities.
- A "dedicated box" appliance solution versus a PC solution.
- Delivery acknowledgements. Currently, they are accomplished via terrestrial back channels. (At some point in the future, Safeway may consider using for a VSAT back-channel)
- Help desk support. Preferably 24x7.
- Storage capacity. What is the right amount?
- Security and Conditional Access.
- TIVO like functions, including: the Electronic Program Guide (EPG) play list; report management; monitoring and failure notifications.
- Ease of use at both the head-end and the receive locations.
- Reasonably priced.

One of the key issues for Safeway to justify the expense in moving to another "Next Generation" platform was the hard drive capabilities and ability to meet the company's on-demand requirements. According to Dan, "...this clearly helped make the move ahead much easier."

There are a number of other multimedia applications in which we are fortunate to be in a lead position—including digital cinema, and telemedicine—in the private sector as well as in government and academic sectors.

ENLITEN: What are the driving applications for satellite-based IP multicasting to meet the users' objectives? Why are companies buying?

RON: Companies are buying for two major reasons:

The first is performance. Satellite is unbeatable for high quality of service delivery. Period. Plus, it is extremely scaleable – in our case the same equipment installation can operate at speeds as low as 256 kb/s up to 72 mb/s and higher. This means that customers can start small and easily add new applications to grow their revenue base.

The second reason is cost. The latest generation of receivers and appliances are comparable in cost with PC's and standard servers. But the real savings are in operating costs. For example, if you are a user who needs broadband T1 (1.5 mb/s) connectivity to deliver smoothly streaming content for 200 remote sites, you will pay between \$100,000 and \$300,000 per month for terrestrial connections (it varies according to location and buying power). The same bandwidth for satellite-based IP multicasting, available across entire continents will cost between \$10,000 and \$25,000 per month. This is what makes IP multicasting affordable and new business models achievable.

ENLITEN: What do you anticipate being the drivers in the future? (Distance learning, streaming, on-demand, digital signage, other)

RON: More of the same. The demand for multimedia content delivery is insatiable. Multimedia means bandwidth and we are still in the early days of a long-term rollout of global connectivity. Whatever applications drive the terrestrial networks will also drive satellite.

Industry Information & Update

The Enliten Management Group tracks the industry suppliers, service providers and users, related to the satellite-based delivery of visual communications for video, multimedia and distance learning applications.

Our goal is to educate and inform you... to do the groundwork and research, so that you can make the right decisions for your organization.

We work hard at keeping up-to-date ourselves, so that ultimately, we can keep you informed and up-to-date... **saving you time and money!**

Enliten offers an on-site presentation to companies and organizations: **Overview of the Satellite Industry**. It's a half-day presentation, covering the satellite-based delivery of video, multimedia and e-learning applications: where the industry is; where it's going; the technology manufacturers; service providers; and users of IP technologies and their applications.

[Please contact Randy Palubiak to schedule a date and for pricing information.](#)

The Enliten Management Group will publish an Industry Report on IP satellite receivers. The report will feature a competitive comparison of the IP receivers, with information relevant to the enterprise user.

[Please contact Randy Palubiak for additional information and pricing.](#)

Selection is Made – SkyStream w/Cisco IP/TV

In the end, Safeway selected SkyStream: its EVR 7000 IP receiver (with 80GB of built-in storage) and Z-Band management system. The selection of SkyStream was made in October of last year and the rollout of the receivers into the stores started in January of 2003. It was completed in only six weeks. Dan claims the experience to be a tremendous success. "We're very pleased with SkyStream and the performance of its equipment."



At the head-end, the configuration includes MPEG-2 Encoders, Mux's and a Management System from Tadiran Scopus and Cisco IP/TV MPEG-1 Broadcast Servers and Control Servers. Programming continues to be delivered via the EVT 7000 IP receiver to television monitors for training and information applications. In addition, content is streamed to the store manager's desktop for live viewing and caching for playback on-demand. Also, content is stored on a CISCO IP/TV Archive Server for the playback of in-store music.

Programming continues to be delivered to television monitors for training and information applications. In addition, content is streamed to the store manager's desktop live, as well as for caching (storage) and later playback.

Dan provided additional comments and perspective regarding SkyStream and its product, "I like the fact that the EVR receiver will work even if the hard drive fails (because it works on FLASH). The system automatically notifies us if there are failures by sending e-mails to our support group. We still have some issues to work out, including access

ENLITEN: What obstacles do you see for prospective buyers of IP multicasting solutions?

RON: In the short-term, the global recession and the resulting freeze in capital expenditures are the biggest obstacles for buyers of IP multicasting solutions. It is also important for them to pick a reliable supplier that has been in the business for a while, has real experience and will still be around to provide them support in the future.

There are no technological obstacles—the technology works, is proven and is "plug and play." But a very real obstacle is that the expertise of many IT/MIS professionals simply does not extend to satellite technology and how easy it is to install and operate.

ENLITEN: How do the industry suppliers help the video and multimedia users overcome these barriers?

RON:

- Education is part of our responsibility—through trade shows and seminars
- Continued investment in R&D to continue to offer newer and higher performance products and services
- Staying involved in industry associations, etc...
- Provide systems that are fully integrated and have the same "touch and feel" of more familiar terrestrial network solutions

ENLITEN: What advice can you give to the non-satellite users regarding delivery of video and multimedia? (Ease of deployment & use, cost effectiveness, expanded reach, applications, etc.)

RON: Call IDC. We will tell you (and show you) how easy it is to deploy—we have more than 45,000 installations around the world, in a broad range of applications.

Enliten Consulting Services

- Industry Trends & Updates
 - Users
 - Technologies & Systems
 - Suppliers & Providers
- Applications Needs & Assessments
- Cost Models & Analysis
- Benchmark Studies
 - with other users and their "winning" applications
- System and Vendor Assessment
- RFP/RFI Development & Administration
- Project Management

Feedback

We encourage your feedback and input in making **Page of Enlitenment** an effective means of providing you with information on industry related trends, solutions and suppliers. Please forward your suggestions or requests to us at enliten@enliten.net regarding the topics, products, services or companies that you would like us to include.

For more information on the topics presented in this communication, please visit the Enliten web site (www.enliten.net) or contact an Enliten representative at 770/590-1590.

security: not just regarding the satellite issues, but also, what's on the hard drive."

Innovative Applications - Revenue Generation

The grocery industry enjoys a huge amount of traffic throughout its stores, with over a billion visits each week. With this level of exposure, Safeway considers it imperative to provide excellent customer service, including: a wide selection of products; good pricing and the need for well-trained, polite employees. This is a key reason for the Safeway network. As per Dan, "The network paid for itself, in less than a year, from the training benefits alone."

In addition to training, Safeway believes that it can enhance its customers' experience, plus increase its revenues through advertising. By using IP over its satellite network, Safeway will be able to deliver advertising and special messaging to digital display systems, strategically located throughout its stores. There are twelve "proof-of-concept" stores, with six display screens located in the Deli, Pharmacy, and Bank and (3 screens) at the checkout area. It is believed that customer purchases can be influenced and assisted, wherever they are stationary for a short period of time within the store. It is important to catch their attention within this brief window or the opportunity to influence additional purchases is lost.

By providing this customer-focused information over its satellite 'home channel' Safeway hopes to generate about \$20 million per year.

Digital Signage – Additional Cost Savings

The good news (benefits) from the IP network continues, according to Dan, "Safeway expects to recognize cost savings by going to digital signage. We anticipate saving millions of dollars per year by replacing the in-store static signs with digital signage/display, by eliminating printing, distribution and labor costs."

ENLITEN: Looking into a crystal ball, where do you see the industry by the end of the year? For the next three years?

RON: By the end of this year, we will see a much tougher and more resilient industry. The early "wannabees" have fallen by the wayside. Expect to see more new products from those of us who have been successful and who are taking the opportunity to continue to develop solutions for this fast-moving, high-growth market.

The state of the industry three years from now depends largely on the timing of the economic recovery. Those of us who have survived the past two years are well positioned to rebound when the market recovers and will see strong growth.

POE Feature Article Archive

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- IP Multicasting Solutions for the Enterprise...Thoughts & Perspectives from A Leading Manufacturer – Beth Mayer of SkyStream Networks
- Technical Training Works Using Interactive Distance Learning! Don Gentry, C.D.L.I, C.D.P. of AT&T
- An Interview with Philip J.L. Westfall, Ph.D., President of the United States Distance Learning Association - Thoughts & Perspective on Distance Learning
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