



Page of Enlitenment

March 2003

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:

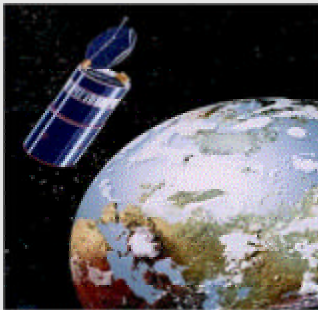
Technical Training Works Using Interactive Distance Learning!

Don Gentry, C.D.L.I., C.D.P. of AT&T

IP Multicasting Solutions for the Enterprise

Thoughts & Perspectives from A Leading Manufacturer – SkyStream Networks

Conference & Event RECAPS



Tradeshows & Conferences

Global Shop

March 16-18, 2003
McCormick Place
Chicago, IL
www.globalshop.org

NAB 2003

Can't miss conference for video and multimedia professionals. **Special Note:** satellite manufacturers and service providers will showcase their IP/next-generation products and services.

Las Vegas, NV
April 5-10, 2003
www.nab.org/conventions/nab2003

Technical Training Works Using Interactive Distance Learning!

Don Gentry, C.D.L.I., C.D.P.
of AT&T

Don Gentry, AT&T Distance Learning Specialist, provides an excellent story about how the Interactive Video Broadcast Network (IVBN) of the AT&T Business Learning Services division of AT&T uses Interactive Distance Learning (IDL) to solve its training challenges.

The IVBN satellite network has been in operation for ten years and currently reaches over 380 downlink locations. In 2002, IVBN produced more than 204 sessions (1,467 hours) of training content, reaching about 7,500 students. The students are AT&T technicians who are responsible for the ongoing performance of the AT&T network, as well various organizations that need to rollout system releases and business strategies. IVBN uses MicroSpace Communications for transmission services and space segment and the One Touch System for the interactive sessions.

Don will describe the challenges they faced: from training the workforce on

IP Multicasting Solutions for the Enterprise - Thoughts & Perspectives from SkyStream Networks

Readers have expressed an interest in knowing more about IP multicasting, next-generation technologies and the companies who make them. What better way to educate and inform the enterprise users than to ask executives of the leading manufacturers to present their thoughts and perspectives in their words?

In this issue, we feature Thoughts & Perspectives from Bethany Mayer, Vice President of Product Marketing at SkyStream Networks. Due to space limitations, we are unable to present all topics and issues addressed by Bethany in this issue of POE. Additional topics are covered in the un-abridged document, located in the "Resource Center" of the Enliten web site: www.enliten.net, or contact Enliten for the complete document.

Bethany is responsible for leading the company's product initiatives, including their requirements and

Collaborate/TeleCon 2003

Jacob Javits Center
New York City, NY
April 7-9, 2003
www.collaborateexpos.com

Learning & Training Week

Washington Convention Center
Washington, D.C.
April 28-May 1, 2003
www.learningandtrainingweek.com

CMMA Conference

(For members & media managers
who qualify for membership)
Contact Enliten for information.
Washington, DC
The Hilton McLean Tysons Corner
May 17-20, 2003
www.cmma.net

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

Contentworld

October 2003
More Info TBD
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.avmmp.com

the existing equipment to the procedures and techniques on new equipment; from getting the staff comfortable to train in front of a camera (versus the students in the classroom) to selling the concept of distance learning to management and the students.

In the next issue of POE, Gary Thompson, technical staff member, talks about the IVBN video production and technical capabilities. In addition, Gary will share with us how IVBN uses a selection of technologies to deliver the AT&T ABLS training including the IVBN satellite network and the Internet, for both live and on-demand participation.

Special note from Enliten: We had the pleasure of working with Don and Gary, through the start-up and early years of the network, when AT&T Tridom deployed its Vistacast service for IVBN as an overlay to the AT&T FASTAR two-way VSAT network. The people at IVBN have always demonstrated a clear understanding about how to provide the best in training for its technical workforce...getting the best return, using satellite, the Internet, the classroom (on-site or at the IVBN training center in Kansas City).

Here's Don's story:

AT&T's Interactive Video Broadcast Network (IVBN)

In the business world today, corporations are trying to reduce costs in all areas. As trainers, we know where business leaders make the first cuts. So, the question becomes how to reduce the costs of training and yet maintain the quality before the ax falls. HOW is always the big question. How could our training group address the needs of our adult learners and at the same time address the business needs of the corporation? This training group accepted the challenge and now has a long proven record of success. A detailed technical training curriculum can succeed using Interactive Distance Learning methodology. Our pilot program started in early 1993 with 20 selected sites and today has grown to over 380 fully equipped, interactive

technology specifications, that are key to SkyStream's growth and corporate strategy. Bethany joined SkyStream from Cisco Systems where she worked in the Office of the CTO, developing the company's technology vision. During her seven-year tenure at Cisco, Bethany held several key management positions, leading marketing efforts for products tailored for the consumer, small business and dial access environments. She also developed the company's early supply chain management strategy. Prior to Cisco, Bethany managed product development efforts for Apple Computers' PowerBook laptop product line. Bethany holds a bachelor's degree in economics and political science from Santa Clara University and also did graduate work in business at Golden Gate University.

Topics, Issues, Answers

What is your perspective of where the satellite industry is today?

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

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

What are your thoughts about satellite-based networks vs. delivery via the Internet?

What are the driving applications for satellite-based IP multicasting? Why are companies buying?

What do you anticipate being the drivers in the future?

What obstacles do you see for Enterprise Users of IP solutions?

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

What advice can you give to the

Broadcast Engineering
www.broadcastengineering.com

Government Video
www.governmentvideo.com

Millimeter
www.millimeter.com

Presentations
www.presentations.com

Video Systems
www.videosystems.com

Advertising, Marketing, Promotions Publications

Advertising Age
www.adage.com

Behind the Themes
(Theme based entertainment)
www.themeit.com

Display & Design Ideas
www.ddimagazine.com

Kiosk
www.kiosk.com

POP Times
www.poptimes.com

Sound & Communications
www.soundandcommunications.com

System Contractor
www.systemscontractor.com

Sound & Video Contractor
www.svconline.com

IS-Internet Related Publications

America's Network
www.americasnetwork.com

Baseline
www.baselinemag.com

Communications News
www.comnews.com

CRN
www.crn.com

EBN
www.ebnonline.com

eWeek
www.eweek.com

Information Week
www.informationweek.com

training locations. Using satellite video transmission and the One Touch Viewer Response System, we provide multiple training broadcasts weekly. The broadcasts have evolved from the initial technical refresher classes to the implementation of new equipment and technologies being deployed in the AT&T SONET Network.

Business Challenges

Our primary mission is to train the AT&T technical workforce in the maintenance, operation and repair techniques of multiple types of equipment used in the AT&T Network. We view this as a two-fold challenge. The first challenge, maintaining (or refreshing) existing skills and knowledge, is mandatory for the current equipment configurations. The second requires the addition of new procedures and new techniques for the new equipment being introduced into the network. The initial business case was created using the first challenge, that refresher training of the technical workforce could be accomplished using Interactive Distance Learning. When that application was approved, it provided the funding for the first 20 locations. By starting small, we could control the environment and correct mistakes and miscues as we learned how to reach our adult learners using Generation X training methods.

As educators, we quickly discovered a multitude of differences between the standard classroom lecture format and the distance learning classroom. The initial challenge was with our staff of long time platform instructors that delivered classroom lecture and provided hands-on laboratory work for skill development and practice. The laboratory format would not work for distance learning. Next, we had to change the attitudes of a mature workforce with regard to how they receive training. Finally, how do you present the detailed technical information that is necessary for the targeted skill set, in a format that will engage the participants and encourage learning? This is a challenge even for the best platform instructor in the standard classroom environment.

non-satellite users regarding delivery of video and multimedia?

Looking into a crystal ball, where do you see the industry going?

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

BETHANY: The backdrop of the satellite industry is a difficult economic climate that dictates every business has to do more with less. In working with several Fortune 500 enterprises on their networks, we have seen increased focus on the top and bottom lines. New technology solutions must have immediate or medium-term impact on increasing revenue or increasing employee productivity. With increased financial performance pressure, all capital expenditures are being scrutinized more closely. The good news is that despite this pressure, there is still keen interest by enterprises that want to grow their revenue base and/or increase effectiveness of their employees through video-based training. These companies are investigating new satellite IP multicasting technologies and looking to upgrade from their existing satellite solution because of the benefits in cost savings and service delivery the technology offers.

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

BETHANY: Satellite IP multicasting technologies are gaining a solid foothold among people who *know* about the merits of satellite including wide broadcast reach and economical rich content delivery. To businesses that have little or no knowledge about satellite, there is still a tremendous amount of education for us to do. Among non-satellite enterprise users, there is still a strong misperception in the industry about satellites (e.g., expensive, old defense technology) that is hard to dislodge. As a solutions provider, SkyStream sees education as one of the top priorities if we are going to capitalize on this

Integrated Solutions
www.integratedsolutionsmag.com

Internet World
www.internetworld.com

Network Computing
www.networkfusion.com

Telecommunications
www.telecommagazine.com

WDM Solutions
www.wdm-solutionsmag.com

Wireless Week
www.wirelessweek.com

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.ssipi.org

Teletraining Institute
www.teletrain.com

United States Distance Learning Association
www.usdla.org

Points to Ponder

1. What if there were no hypothetical questions?
2. Is there another word for synonym?
3. Isn't it a bit unnerving that doctors call what they do "practice"?
4. Where do forest rangers go to "get away from it all?"
5. What do you do when you see an endangered animal eating an endangered plant?
6. If a parsley farmer is sued, can they garnish his wages?
7. Would a fly without wings be called a walk?
8. Why do they lock gas station bathrooms? Are they afraid someone will clean them?
9. Why don't sheep shrink when it rains?
10. What was the best thing before sliced bread?

The first challenge is to get the staff in front of the cameras. There exists an adage among educators that most teachers are really frustrated actors. The trick is to discover which of those existing platform instructors fit the frustrated actor description. With gentle (or not so gentle persuasion), a few volunteers in your organization will come forth. Initially those volunteers should practice in front of the camera but off line, rather than on the air. This is the audition. Camera presence can be developed, but some instructors will show a natural ability that stands above the rest of the group. Those who have IT will quickly surface and those who do not usually step aside. Choose a dynamic presenter, someone that uses facial expressions, body motions and maybe even has *the voice*. We have all watched those dry, boring video training tapes. How much did you learn? Another item to remember is the participants have certain high expectations when they are watching television, and that expectation is to be entertained. To the learners they are just watching television.



The second challenge seemed even more insurmountable. Our target audience has a fixation on the standard classroom lecture/lab training presentations. This obstacle became a marketing opportunity. We used multiple tools to address this opportunity. Selling upper management on less travel time, less time away from the office, less overtime was the easy part. Selling the target population presented more of a challenge. Resistance was heavy at first. The evaluations from our initial broadcasts were in the cellar. This

market opportunity. To do this successfully, enterprises have to see tangible benefits of using satellite to deliver video-based communications for both education and other services so ROI and case studies are essential tools to accomplish this. One fact is certain, that if an enterprise has over 100 sites, multicasting rich content to those sites using satellite will be less expensive for the same amount of bandwidth than unicasting over a terrestrial link to those same sites.

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

BETHANY: The Internet has proven to have a tremendous impact on the enterprise market regarding delivery of video and multimedia because it demonstrated how wide and varied amount of content including audio and video could be made accessible to many at the same time – just a click away. However, the unicast format of the Internet hasn't been very successful as the platform to deliver large amounts of rich content such as TV-quality video to large audiences, but it has been invaluable to content providers in how it changed people's views about value of accessing different types of content from viewing streaming live video of their CEO to Web-based conferencing, etc. Coupled with high-speed broadband access, business users have also been primed to expect more from their communications both internal and external. In this way, the Internet has increased the expectation and demand for rich video content – setting a perfect stage for satellite-based networks to really provide TV-quality – full screen video on-demand.

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

BETHANY: Satellite networks have been around for decades, and are the backbone of most video networks. Consumer cable television would not be possible without the satellite networks that support it.

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.

In addition, Enliten will publish an Industry Report in late April 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.

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
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- **Project Management**

training group found no magic formula; it just takes time to change an entire cultural attitude. If your presentations look professional, are entertaining as well as informative, the target population will eventually respond. Choose the material for your initial broadcasts carefully. Find out what the current hot buttons are for your target population and prioritize those needs.

Technical presentations do not have to be dull, boring and lifeless. Really great technical instructors use many techniques to prevent dull presentations from occurring in the standard classroom. Allowing those same classroom techniques to be used in the video presentations not only enhance the broadcast but also engage the learner much quicker. Our experience has shown that colorful graphics, animation, real failure scenarios using actual equipment and learner interaction greatly improve the presentation. It is important to keep the broadcast as close to flawless as possible. This is still live television, so close does count. Sure, some mistakes are expected, but what do experienced instructors do in the classroom? Most just correct the mistake, perhaps laugh then go on, or use the "this is just a drill to see if you are awake routine." Practice is the critical difference between a mediocre on-air presentation and the outstanding, professional broadcast that today's television audience expects. Our Distance Learning Specialists are noted for standing around continually talking to themselves (practicing?). Another enhancement is to allow the presenters the freedom to do their own thing, just as they do in the standard classroom. The less restrictive the broadcast studio, the better the presentation will be. Remember, all good instructors move about the classroom, usually a great deal. Do not tie the presenter to a podium. Use the video technology to help improve your presentations. For example, have you ever viewed the option switches on a circuit pack really close? Use the camera to zoom in to small details, fill the entire screen. The use of Chroma Key technology (The Weather Channel) allows the presenter to get inside the small details, really up close and personal.

Almost all video that you see in a video-powered enterprise is delivered using a satellite network. Why is this? Simply put, the reach and power of satellite networks to deliver large amounts of video to multiple locations dwarfs those of terrestrial wired networks. Satellite networks are by their very nature *multicast networks*, that is, they are point-to-multipoint in transmission architecture.

Terrestrial wired networks, IP networks, are specifically designed to carry unicast, point-to-point traffic, and often require upgrade or modification to carry multicast traffic. Satellite networks exploit the economics and advantage of broadcast television, making them the most effective way to move the large amounts of video and IP to multiple locations in the video-powered enterprise.

ENLITEN: **What are the driving applications for satellite-based IP multicasting? Why are companies buying?**

BETHANY: In our view, the driving applications vary based on region. In Europe, digital signage has captured the latest buzz. Using video at the retail point of sale can be one of the most effective ways to influence the customer and increase sales. We have seen that in addition to traditional retailers, such as department stores, new types of retail stores such as grocery, convenience and consumer durable goods have begun to use video in the store to generate sales. All are seeking to generate additional sales by delivering dynamic, targeted relevant and up to the minute information and advertising for in-store retail promotion.

In the U.S., we continue to see demand for video-based corporate training networks. Most business television/training networks today are based solely on live broadcasts for interactivity, and the value to employees to augment these services with content on demand is quite significant. These current interactive infrastructures are where most of our

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.

Skystream Networks

For information about SkyStream Networks, contact Christine Lenz at (408) 616-3312 or via e-mail at christine@skystream.com, or go to the SkyStream website www.skystream.com

Special Notes:

Enliten's Randy Palubiak will be the featured speaker on an iLearning web cast March 20, 2003 (2:00 PM EST) on *Visual Communications & e-Learning Using Satellite*. Enliten associate Dr. Jolly Holden, Chairman Emeritus USDLA, will join via audio conference as a subject matter expert on distance learning.

The program is part of iLearning's ongoing **KNOWLEDGE Transfer Online Seminar Series**.

For information about the web cast, or to register, contact Yvette Freeman at 410/951-2847 or go to the iLearning web site: www.illearning.com



Don Gentry

Interactive Distance Learning – A Success Story

Can you successfully present technical training using Interactive Distance Learning? The answer is a resounding YES, technical training can be successfully adapted to distance learning. There are obstacles, challenges, naysayers and those who will resist any change, but today our broadcast evaluations and feedback are excellent. Participant comments are positive and feedback indicates we are reaching our audience with the necessary information. Some participants say they would rather use distance learning instead of having to travel to a distant city for training. We have concluded that a live video broadcast, with the ability to interact with the presenter is as close to the standard classroom environment as you can be, without really being there. Best of all, this methodology meets our initial goal of reducing training costs dramatically and meeting the target audiences' needs.

NOTE: In the next issue of POE, Gary Thompson, talks about the AT&T IVBN video production and technical capabilities.

Conference & Event RECAPS For the Enterprise User February 2003

Satellite 2003 – Washington, DC

Although Satellite 2003 is typically not targeted for the enterprise user, it continues to be an excellent opportunity

customers have begun their operations, and the migration to a combined interactive, on demand service is where we are helping them go. The end result has been more tailored content viewed at the convenience of store managers and employees as demanded according to their schedules.

Whether it's digital signage or business communications, the satellite-based IP multicasting network supports both in one network, and it's just a matter of which application fits the enterprise business objective.

ENLITEN: **What do you anticipate being the drivers in the future?**

BETHANY: We see the digital signage and distance learning as being drivers of the future. Digital signage because of the continued pressure on businesses to tie capital expenditures to increased revenue. This is particularly true among retailers where revenue per square footage is still the measurement by which they allocate technology budgets. We also see that quantifiable results are a must for senior management to see when spending on new technologies and digital signage has the greatest tangible impact on revenues of specific products.

We predict that budgets for distance learning networks will continue to stay the same or slightly grow because it too has a quantifiable impact on the bottom line regarding cost savings and increasing efficiency of a workforce. In addition, education is already a known cost center and human resources departments will continue to have budgets for the near future.

ENLITEN: **What obstacles do you see for Enterprise Users of IP solutions?**

BETHANY: The main obstacles to first time buyers of satellite IP multicasting could be lack of internal experience and familiarity of the

to meet with many of the manufacturers and system integrators we're familiar with. Overall, the conference provided the chance to get an update on what the industry's leading suppliers are up to; including a validation that IP multicasting is gaining momentum.

Due to consolidation, there are only a few world satellite operators remaining, including: Eutelsat; Intelsat; PanAmSat; Loral Skynet and SES Americom. Executives from these companies addressed key issues of the industry during the opening session of the conference, such as: consolidation of the satellite operators; their providing of end-to-end solutions; in-orbit reliability of satellites; space segment capacity; and transmission security, monitor & control.

Overall, the conference was good, and as always, well-timed leading into NAB in April.

Global VSAT Forum (GVF)– Washington, DC

The GVF hosted a one-day summit meeting at the offices of Intelsat prior to the Satellite 2003 Conference. The summit included a number of panels, featuring many of the industry's leading operators, manufacturers, business analysts and technical experts. The summit covered a relevant topic facing our industry – interoperability, open-standard satellite systems versus proprietary systems.

It was discussed that one of the key concerns is the need to educate the marketplace on the value of satellite communications: to dispel the notions that satellite is expensive or too difficult to deploy or maintain. Something we're quite familiar with.

The GVF Broadband Multimedia Working Group (BBMM WG) presented its initial draft of an Industry Declaration outlining the role of satellite communications in providing broadband services. We look forward to more information from BBMM WG.

technology offering. Most IT managers are familiar with terrestrial based networks and envision bigger pipe and lower bandwidth cost to solve the bandwidth required for a video based network. However, the actual benefit of doing more with less is where IP multicasting over satellite networks excels as a solution. In addition to technology, enterprises are already working with a terrestrial based service provider, and it will require more resources and time to work with a satellite service provider.

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

BETHANY: By developing products that are focused on meeting their business driven needs. Our products must provide a low capital commitment, and help them save money on their ongoing operational costs. Products and solutions today must also consider future application trends as an investment protection for the future. This requires products that are flexible for network growth and changes as applications evolve and new business plans get developed. Finally we need to be well versed in what the enterprise customer's face in their industry and respond quickly to their changing needs as the industry dynamics change.

ENLITEN: **What advice can you give to the non-satellite users regarding delivery of video and multimedia?**

BETHANY: The more content you have, the more sites you have, the more satellite makes sense. Satellite possesses reach (footprint), ability to address all constituents with a dynamic, powerful and uniform message at the same time. Due to advances in satellite technologies and enterprise solutions, users can now multi-purpose video for delivery to both the TV and PC desktop, time-shift and cache video for later viewing, on either the TV or PC, and deliver next-generation hybrid video/IP services such as interactive communications. Given the cost

comparison, it is clear why satellite networks are the clear choice for video-powered enterprises.

ENLITEN: Looking into a crystal ball, where do you see the industry going?

BETHANY: In the next year, we see even more deployments and pilots in the digital signage space due to increased competition among retailers. In the training space, we see a demand for more sophisticated and flexible networks that can handle both IP data and video in a single network for tailored internal education programming. In the next three years, we see an overall demand for video services and networking solutions, as the use of visual communication becomes more the norm for wider variety of businesses. We also see the adoption of hybrid networks that use both satellite and terrestrial networks increasing as users become more experienced with using the right network for the right content.