



Thoughts & Perspectives as We Enter 2007 Based on Findings in the Archives Randy Palubiak

I hate to see 2006 end. It was a very busy, rewarding year for Enliten.

In fact, after seven great years on the Marietta Square, we moved the Enliten office to Alpharetta, where we are far closer (nice oxymoron) to most of our locally based clients... more importantly, easily accessible to those who visit us.

In years past, my thoughts and perspectives have typically focused on new, innovative technologies and the trends and indicators we see impacting our roles as media managers and enterprise communicators. I'll do a bit of that too, but will leave much of those topics and issues up to the accompanying articles and write-ups by the other Enliten associates.

I decided on a different topic/approach, pretty much as a result of the office move.

It didn't take long to realize that we saved quite a bit over the years. Courtney Bromwich helped complete the first phase of categorizing and filing everything in a meaningful manner. Actually, there is a very good amount of information: industry publications, newspaper articles, newsletters, success stories and case studies, white papers, vendor brochures and even advertisements. As you can imagine, many of the topics are not too unlike those of today: two-way videoconferencing, desktop video, business television, training, e-learning, high definition (HD), video on-demand, digital signage, video production.



The lesson learned is that being a pack-rat does have value, assuming that we are able to put the collection of information to use. Here are a few findings, observations, lessons learned.

Findings - Articles



Teleconference, *The Business Communications Magazine* – the 1991 TeleCon XI Show Issue featured a number of interesting articles including:

“Videophones” - providing a perspective on offshoots of the picturephone prototype demonstrated by AT&T at the 1964 New York World’s Fair. Pat Portway, who authored the article, was very much on target regarding how videophone (like devices) would “empower the individual to personally communicate with video”.

The goal today is to get video content to individuals anytime, anywhere on the viewing device of their choice. In the enterprise space, it is critical to get content to individuals when and how they need it, not simply push it to them at inconvenient times.

Profile - Nicholas Negroponte, the founder of the MIT Media Lab, gave his perspective on merging the broadcast, print and computer industries through the “Merger of Computers and Video.”

Today we’re in the midst of PC and TV convergence.



Presentation Products, in its May 1993 issue featured an article “Long Distance Presentations” on videoconferencing.

The article started out talking about the AT&T PicturePhone, but then goes on to address how ‘educational and business users are embracing videoconferencing.’



More than a decade later, we still address the same issues and guidelines: understand the application, the target audience, the business need; what is the right solution and vendor for you; what are the costs; what is the budget; what are your expectations; what are the limitations.

Also, like we say about any technology, it is not intended to totally replace other means of communications or training, but to provide the appropriate supplementary, complimentary blend.

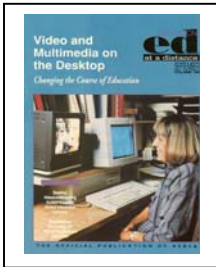


Delta Airlines **SKY** Inflight Magazine featured an article on “Face to Face” meetings in its February 1988 issue on the benefits of two-way videoconferencing and satellite-based videoconferencing (BTV).

At the time of this article, videoconferencing was becoming more popular, more affordable. Early systems that were designed for boardrooms cost \$400,000 to \$500,000 per location. Newer systems were rolling off the shelf, literally. Stand-alone systems (not built into the boardroom or meeting room) were available for under \$100,000 and a number of roll-around units were under \$20,000.

It is interesting how the videoconferencing systems were large, but going down in size, with the forecast to be replaced by “desktop” technology. Today, videoconferencing systems of various types are in most every organization. However, desktop videoconferencing is still looking for traction, despite the wide-spread usage of Webex and other collaborative tools, as well as the embracement of webcasting and streaming.

Now that Cisco has introduced its “Telepresence” solution, which addresses a variety of sizes including the executive desktop system, it will be interesting to see how AT&T’s PicturePhone concept does in the business environment. Especially, as we become more dependent on digital video and media communications, including the use of cell phones and PDAs, which are competing for the individuals’ attention.



Ed, Education at a Distance magazine was the official publication of the United States Distance Learning Association (USDLA) in 1993. In its September issue, the magazine featured a number of articles and white papers on the technologies and solutions available and/or forecast at that time for distance learning, such as desktop videoconference and the “high-speed information highway” envisioned by vice president Gore.

In his article, “Education Takes a Spin on the Information Highway,” Dale Harris speculates that “the education infrastructure will probably change more in the next 25 to 50 years than it has over the last two or three centuries.”

I am confident, and am sure that most of you would agree, that this has already been achieved and will do so a few more times by 2043.

Other timely and informative features covered “Telepresence: Technology for Interactive Distance Education,” and a detailed discussion/position on “Which Television Medium is Best for Distance Learning.”

It is intriguing to see how very informed experts viewed then the technologies and solutions that are and will be best suited for distance education. Many have proven to be accurate. Although the systems and solutions may be slightly different, they are innovative and more advanced.

Much of the terminology is similar to what we use today. For instance, videoconferencing, teleconferencing, telepresence, desktop video, virtualization, video-on-demand are terms we have been using for years.

High Definition Television (HDTV) – Content providers are producing programming in HD. Broadcasters are converted(ing) to digital transmissions and HD. Flat screens and projection systems display HD in 720 and 1180 with progressive (p) gaining traction.



A number of special issue publications and NAB program inserts from 1990-1991 featured updates and trends about HD – 1125/60 HDTV was the working standard some fifteen years ago.

A **Video Systems/Broadcast Engineering** supplement featured a number of enlightening articles, including “The Long Road to HDTV” by John Rice. It provides a chronological overview of HDTV to that point... The prototype system was demonstrated in the early 1980s and production started in 1985. It was used by the medical industry, museums, display and presentation companies for corporate lobbies and public areas, and high end corporate presentations by companies such as Coca Cola and Ford.



Barry Rebo authored an article about his company Rebo High Definition Studio and their pioneering efforts in HDTV production starting in 1986.

Today, enterprise organizations are upgrading their facilities with HD technology. There really is not much of a choice as SD heads toward legacy status.

As **Via Satellite** is celebrating its 20th anniversary, we came across a copy of the magazine's inaugural edition. I am pleased to share with you that I authored one of the articles. It featured KPLR-TV, its communications division Koplars Communications Center (Koplars), and their roles during the early stages of satellite broadcasting.



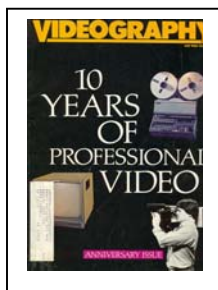
KPLR/Koplars was recognized throughout the television and satellite industry as an innovative company being one of the country's first teleports. KPLR/Koplars had one of the first Western Union local loops (#0000000000000001, or something like that), which was connected to our uplink and AT&T's T-45 landline network (this was prior to the divestiture).

At KPLR/Koplars, we trafficked news feeds, sporting events, and corporate events on a regional and nationwide basis. We installed fixed microwave hops and portable systems throughout the St. Louis metropolitan area for local events. In fact, KPLR/Koplars has the distinction of doing the first transborder broadcast from the US to a Canadian satellite; it was a three game series of Toronto Blue Jay baseball games with the Royals, which was landlined to KPLR/Koplars from Kansas City.



Findings – Industry Time-lines

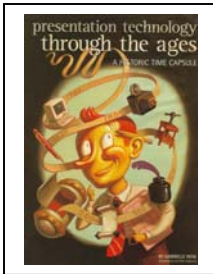
During our archiving process, we found a selection of timelines on a variety of topics.



The July 1986 issue of **Videography** features a couple of interesting, informative articles including "One Man's History of Television" by Mark Schubin. Schubin provides a detailed listing of the recording of historical events starting with Aristotle's description of image projection in 350 B.C. He continues until 1986 with the first digital VTRs from Ampex and Sony and the introduction of 8mm professional camcorders from Hitachi.

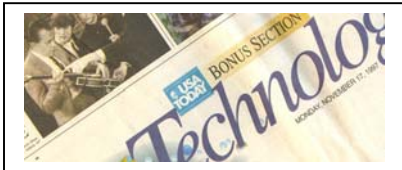
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In the same issue, Susan Chumsky provides “Echoes of Conversations Past – Highlights from 10 Years of Videography Interviews.” One of the more interesting quotes is from Herb Schlosser, VP of software development for RCA Videodisc in February 1976. “The average film that has done well at the box office will be seen on disc, perhaps at different times by different members of the family. The disc will be put back on the shelf and then maybe three months later it will be pulled out again and repeated. Films on the disc will be repeated more than people think. Television itself – network, pay-TV and syndication-demonstrates that audiences see films over and over again.”



Gabrielle Rose authored “Presentation Technology Through the Ages” in 1999, beginning with carvings in 45,000 BC and ending with the introduction sub-five pound projector systems and the Internet reaching 200 million users in 1999. Television debuted in 1939. Holography was invented in 1947. The Soviets launched Sputnik in 1957. Floppy discs were invented in 1970. IBM’s PC debuted in 1981. AOL is founded in 1985. Texas Instruments introduces its DLP projector to the market in 1996.

Another timeline to highlight is in the Technology Bonus Section in the November 17, 1997 issue of *USA Today*.



As you can imagine, it includes a selection of significant technology introductions as well as landmark programming events, such as: premieres of the *I Love Lucy* show in 1951 and *Captain Kangaroo* in 1955; coverage of the assassination of President John F. Kennedy in 1963; combined

news coverage of the Vietnam War by the television networks averages only three minutes per day in 1965; HBO introduces pay television in 1972; Betamax is introduced in 1975, VHS in 1976; CNN in 1980; 1991 brings live coverage of the Persian Gulf War; the first program delivered via the Internet is in 1995 called *Computer Chronicles*.



The issue includes 24 pages of featured articles on “Television’s Next Wave:” Digital TV, HDTV, The blurring lines between TV and Computers, and perspectives on how TV will turn from passive to interactive. Ten years later we are there. The question we may pose is “has it been ten long years” or has time flown by?



Although it is a bit more recent, the December 2006 issue of *Via Satellite*, features an article on 20 “Years of Via Satellite: How the Commercial Satellite Industry Recaptured Public Attention.” The timeline actually starts with the launch of AT&T’s Telstar I and initial transmissions in 1962. It includes other key dates for consumer services such as DirecTV, EchoStar’s Dish Network, and XM and Sirius radio services.



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Findings - Case Studies and Success Stories

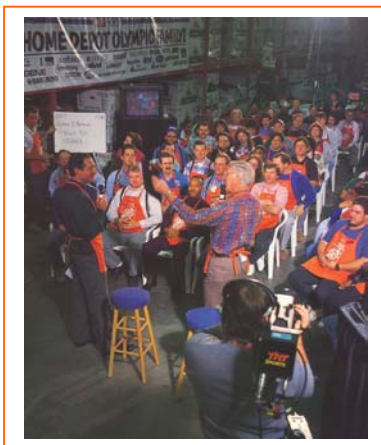
I was around throughout the seventies as videotape displaced 16mm film and 35mm slides for many broadcast applications and corporate productions. During the eighties, I participated in bringing computer graphics and video production into the enterprise space, as they enhanced corporate presentations and meetings. Also, it was during the 1980s that satellite delivery became a mainstay for broadcast television, cable companies, and oh yes, business television networks.

Our selection of case studies and success stories is vast on video productions, corporate events, satellite-based business television (BTV), and interactive distance learning networks (IDL). Many of the BTV networks are still very much alive today. Some of them are not. Innovative technologies, changing business environments and business drivers, fluctuations in the economy, compliance issues and other legal challenges are influences that continue to impact change. As a result, organizations move to other means to distribute content such as webcasting, streaming or even new formats of hard media. In some cases, organizations are moving to satellite. Not too unexpected, considering the increased amount of consumer-based video and new media content that is delivered via satellite.

Edward Jones Company conducted a series of ad-hoc videoconferences beginning in 1983. John Bachmann, Managing Partner for Edward Jones at that time, expressed the need to communicate more effectively to the company's Investment Representatives (IRs) and customers. According to Bachmann, "...can't win with technology, but you can be beaten without it!"



By the late 1980s, Edward Jones was on its way to becoming the largest BTV network of 10,000 receiving locations. Steve Clement is the principal partner at Edward Jones who manages the video production and BTV network organizations.



In 1989, The Home Depot conducted live quarterly programs from store locations throughout the country: *Breakfast with Bernie and Arthur*. The programs featured the company's co-founders Bernie Marcus and Arthur Blank, who were responsible for instilling a corporate culture that was engaging with, and embraced by, all Home Depot employees. Rob Hallam was the director of business TV for Home Depot's HDTV at the time and is recognized for guiding the use of the network to be an invaluable tool for corporate communications.

Since then, HDTV has expanded to more than 2,000 stores, with multiple program channels. In addition, the satellite network has now been enhanced with IP-based technologies to provide business continuity (disaster recovery) applications as well as HDTV content.

That same year, Amoco Corporation celebrated its 100th Anniversary by broadcasting one of the largest, most exciting ad-hoc events in history. Originating the two-hour program from Chicago's McCormick Place, Amoco reached more than 91,000 employees and family members at 40 viewing locations throughout the world.



Six additional locations throughout the U.S. and Canada contributed locally produced entertainment via satellite backhaul transmissions. The highlight of the event was the syncing of dancing/singing numbers from all seven origination sites into the primary program. This event was the brainchild of Amoco's Carney Barr.

Overall, the automotive, high tech, and pharmaceutical companies were early visionaries of the both the ad-hoc and dedicated satellite networks.

Companies and Directions, Changing with the Times

It is amazing, somewhat overwhelming, when you realize the number of companies that no longer exist. They have been bought out or merged into larger companies, and companies from different spaces have leveraged their assets and intellectual capital to enter new business lines. Some just didn't make it and shut down – may not have been their time – and good industry people moved on to other opportunities. The list is extensive – I won't bore you with the minutia.

Remember AT&T in the mid-nineties before selling off all of its non-core assets such as Lucent, NCR, its shares of EchoStar, and of course, the satellite divisions: Skynet to Loral and Tridom/Vistacast Services to GE Spacenet? Bob Allen, CEO of AT&T, had the vision to provide a wide array of complimentary communications services to the consumer and business communities – bundled services. Great idea, but it was not the right time.

The markets didn't respond favorably. As you know, the telecom industry went through punishing times during the downturn of the economy in the early 2000s. AT&T sold off a good deal of its interests in cable (Time Warner) and cellular services (to the SBC and Bellsouth joint venture: Cingular). AT&T then purchased by one of its own spin-offs from the divestiture in the mid-eighties (one of seven regional bell operating companies): SBC. In a turn of fortune, the new company was re-named AT&T. Recently, AT&T purchased Bellsouth, another one of its spin-offs, and as a combined organization, changed the name of its Cingular cell phone business to AT&T.

Further, corporations of all types and sizes are now building their futures on bundled services, whether they are accomplished through mergers and acquisitions or strategic relationships. For example, AT&T, Verizon, and the telco community provide their voice and data services (Internet) to the consumer and business markets, via hardwire, wireless, and even satellite. In addition, they are developing, and in some cases implementing, their respective video services to provide entertainment, news, and other programming into the home to compete with the cable and satellite television companies. This service is typically referred to as IPTV – the video service of the telco “Triple-Play,” with mobile being the “Quad” component. You may have heard of AT&T’s service called U-verse and the Verizon service called FiOS. In turn, the cable companies are providing voice and data services, along with their video programming, to compete with the telcos.

Cisco, Microsoft, and other major high tech and networking companies are equally aggressive in establishing their footholds in video and new media industries. They are involved in getting video and rich media into the home environment – for wide area and last mile delivery, the in-house local area network (LAN), wired or wireless routing, media center systems to store, and manage the viewing of content. Ultimately, we will benefit in the enterprise community as these systems and solutions become available for us to provide similar services for our internal clients.

In certain instances, the telcos, networking and satellite companies co-market and brand their respective services. For instance, SES-Americom has partnered with numerous companies including Cisco, AT&T, and NRTC (National Rural Telecommunications Cooperative) to provide IP-Prime service, its satellite-based IPTV content delivery services, to many of the thousands of telco points of presence throughout the country.

Programming and Content Delivery Approaches

Satellite-based ad-hoc special event videoconferences (SEV), which were very big during the eighties, are still very popular. Hundreds of organizations have conducted SEVs over the past twenty-plus years. Many of these organizations embraced satellite to the point where it became economically feasible to install dedicated networks, producing a substantial amount of communications and training.

Innovative, business savvy hotel and movie theater chains have established departments, if not divisions, to promote, sell, and support nationwide events where content is delivered via satellite. They provide most, if not all of the meeting facilities, audio/visual systems, and amenities. Simply put, organizations need to communicate and train widely dispersed employee and/or client populations; satellite is still one of the best ways to do it in a timely, economical way.

Now, there are a number of approaches to extend the reach and enhance the viewers’ experience. Webcasting and streaming services get content to audiences in one-off, maybe hard-to-reach, or distant locations (outside of the continental US). Flat panel and desktop display screens are now as common as the traditional TV and monitor. If you haven’t noticed, digital display screens are virtually everywhere. Cell phones and other mobile display devices will become viable for delivering content, as on-demand and podcasting capabilities conveniently extend the reach of targeted audience members.

Observations

Clearly, history can be helpful. For instance, by seeking out answers to key questions, we can learn from past experiences.

- What technologies and innovative ideas have had the greatest impact on us and have influenced what we do today?
- Which ones helped us do our jobs easier and better – accomplished our objectives? Which ones might we still be using today....old, tried and true, but still do-able and functional?
- Which technologies and ventures bombed?
- Which ones didn't gain traction then, but are doing so now?

Talk about convergence. As mentioned earlier, virtually every company, in every industry, is getting into everyone else's space.

High tech, computer companies make display systems. Display and video companies make computers. Terrestrial service companies provide satellite and wireless services and deliver programming content. Cable companies are providing voice and data services. Broadcasters own content companies. Microsoft, Google, and Cisco might eventually own everything.

Cisco has established four video-based companies in the past year as entries into the enterprise video segment. In addition to Scientific-Atlanta, Cisco is now in the digital signage business, desktop video, IP video surveillance, and videoconferencing with its TelePresence offering. Arris, a broadband equipment manufacturer, is in the process of purchasing Tandberg Television, a video compression, transmission, and interactive TV software vendor. This positions Arris to compete with Cisco and Motorola.

As history has proven, these innovative advances, company mergers, and acquisitions are very good for all of us....as, what we do with visual communications become more significant for our organizations!

Please let me know if this article was of interest to you, if you would like to see more like it....as we work our way through the archives.