



Video in the Enterprise — An Affordable Business Requirement

Digital video is decades old. The Digital Transition and Public Safety Act of 2005 super-charged the move from analog to digital for both consumer and enterprise uses, causing a revolution in content creation and delivery. This, in turn, fed the social media and handheld device video revolution. Witness how far we have come in the past 5 years with the use and adoption of video as a way to share experiences, ideas, and information.

This transition has rapidly lowered the costs of the tools used to capture, edit, deliver, and view digital content. Take, for example, the costs of consumer or prosumer cameras and the availability of high definition cameras for capturing content. Even the average smartphone now captures video in resolutions up to full HD. When Apple™ introduced iMovie™ and later Final Cut Pro™ software, it revolutionized the home video market. It also revolutionized the ability of enterprises to capture and share information internally. Similar products from Adobe™ and others have created a market of tools that make possible the creation of high-quality video content with standard desktop computers and basic computer skills.

These content creation tools spurred development of great tools for delivering and displaying the content. Content delivery solutions range from file copy using a thumb drive to full-featured scheduling and delivery systems that are user-managed from a Web browser anywhere, anytime. Playback devices can be simple players for video streaming, like what we find in hotel rooms. More commonly the playback device is an appliance that provides live and on-demand playback and includes the ability to schedule playback—as in the case with digital signage players. These playback capabilities also include support for localized content specific to the site or activity.

But it is not just a matter of simplicity and affordability. It is also a matter of business improvement and growth. Significant research regarding employee engagement shows that using digital media like video to communicate, train, inform, and engage employees is critical to the effort. Engaged employees have a lower turnover rate, resulting in substantial savings. Informed employees offer better customer service and can deliver significant increases in product sales and customer loyalty.

In our digital society people are accustomed to producing, sharing, and receiving information using a network, and they don't need to be broadcast engineers or IT professionals to do so. Forward-looking enterprises are benefiting from this trend by utilizing digital video to communicate. These organizations find that with existing tools and resources, they can implement enhanced and expanded video communications for less than they spend on coffee.

The Digital Transition and Public Safety Act of 2005 required all full-powered TV stations in the US to complete their transition from analog to digital for free over-the-air programming by 2009. The digital transition provides a better and more dependable picture than analog transmissions and frees up spectrum (airwaves) for emergency services and wireless communications.

Business Drivers – Why You Should Care

While digital media has many applications, we will focus on three main functions: employee communication, workplace learning, and customer-facing signage.

Employee communication comprises the executive messages, business updates, information about benefits, and programs and processes that are necessary for employees to maximize their work experience. Usually employee communication is not tracked nor reported on a user-specific basis. And often the messages are site specific.

Workplace learning is the delivery of training required for performance improvement and support, advancement, or to meet compliance requirements. Learning results and performance outcomes are usually tracked, reported, and measured.

Customer-facing communication refers to the use of digital signage, digital kiosks, promotional boards, and other “front of house” digital systems to enhance and influence customer experiences.

All three functions can share infrastructure as well as leverage a common set of technologies to create, manage, deliver, track, and display video communications.

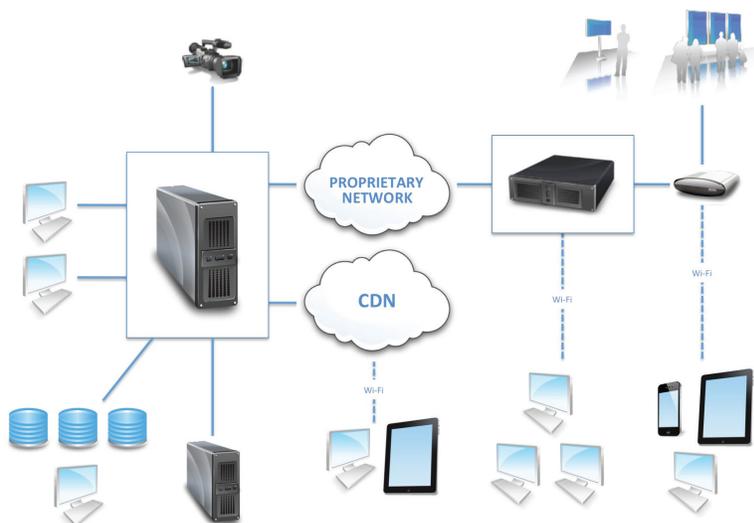
Innovation and Technology Advancements

Video adoption in the enterprise has benefited from general innovation and technology advancements, including:

- Compression technology, which allows a greater amount of information to flow over the same network capacity. This same capability also enables more hours and higher quality video content to be stored in the same amount of storage capacity.
- Automation that allows the organization to create a single version of the video and have the “system” automatically prepare the video for playback on multiple devices and operating systems.
- Encryption solutions, which can ensure that during transport the content remains secure and only will be viewed in locations that are authorized. Consumer examples include Pay-per-View TV events.
- The cost of equipment necessary to store large digital content has decreased dramatically. In today’s market you can store more than 300 hours of HD video on \$60 worth of drive.
- The usability of core software solutions—content management—has improved significantly. Any user can now operate robust content management services.
- “The Cloud” refers to both software and storage access from a shared infrastructure. Major Cloud services are now enterprise-grade and are being widely adopted for increasing service and minimizing costs.

The Enterprise Video Ecosystem

The video ecosystem comprises software and hardware for creating, managing, distributing, and displaying content. The following image gives some scope to the enterprise video ecosystem. It flows from content creation in the upper left through distribution to display.



Content capture and creation

Whether you utilize full-featured digital cameras, desktop computers, smartphones, or a combination, video capture is the front end of the ecosystem. Your business objectives will drive how far and how fast you invest in this first step. If your objective is to create video on-demand assets that can be played by employees or customers, then utilize a simple digital camera. If your objective is to stream live town-hall meetings, then a more expensive camera with greater functionality will be required.

Creating or editing the content requires software that enables users to capture footage using various devices and compose it into an asset that can be shared.

Content management

Too often the content management step is overlooked, but it is important and does not require a deep investment. Content management solutions are commonly part of the content delivery solution, but may be implemented separately. Simple systems are applications that you install on existing servers to track assets and their revisions. More advanced solutions will include scheduling services, metadata capabilities, and interaction with content delivery.

Content delivery

Network utilization concerns often stall video implementations. This need not be the case any longer. Today's content delivery tools allow for scheduling and limiting the impact on the network. They are typically built to interact with the content management system, and are robust enough to minimize the impact on the corporate network. There are options, depending on the breadth of your delivery requirements, that can improve and facilitate delivery to many sites. Working with a trusted provider, you can review these options and determine which is right for today and develop a growth path into the future.

Moving enterprise content across the network raises security issues. Again, working with a trusted service provider you can get the proper assurances that content is protected using current, industry standard solutions and technologies. The security should be built into the content delivery solution and should not be an additional cost burden.

Remote site storage

If your goal is to stream live town-hall meetings, then remote site storage is not an issue. But if you plan to make these meetings and other recordings available for offline viewing (which is often the case as the use of video increases), you need a plan for content storage.

Since you don't want to burden the home office network with too much traffic from the distributed sites, there are two options to consider for content access; Cloud storage, and remote site storage. Your choice depends upon the volume of usage at the remote site. You can also mix Cloud with onsite storage. If more than three to four employees will be accessing content simultaneously, you should strongly consider onsite storage. If you will have one to three accessing simultaneously, a Cloud storage solution is sufficient. If you are planning some customer-facing signage too, then a remote site storage point for content is a very important component.

Playback and viewing

This is the final and arguably the most important step in the ecosystem. If the viewer's experience (customer or employee) is poor, the viewer will not return and you will lose the value of the information you have created. Make it easy and pattern it after the consumer solutions used in homes today. Think about the DVR that is in almost every home. There is a program guide that shows content available to view (live and on-demand) and there is the ability to work directly on the DVR with a remote control OR indirectly, viewing with a tablet, PC, or smartphone.

Accumulating Information

Lower cost and enhanced functionality have enabled many departments to justify and implement video systems. Organizations often have most of the necessary equipment, systems, and infrastructure required for effective video communications and workplace learning. However, they may not realize what they have accumulated over time. Compounding the situation is the silo effect, where multiple departments and business units submit requests for separate solutions, overwhelming the ecosystem.

Video capabilities have quietly appeared in various business units throughout organizations, including video production studios, distance learning studios, two-way videoconference and telepresence systems, desktop video, and mobile devices

or cameras for offsite originations. Also, workers across enterprises are creating User-Generated Content (UGC) and editing it on their desktops and mobile devices. These capturing and editing systems are separate from, but complementary to, centrally managed studios and production operations.

Display screens may already be available throughout the enterprise. Televisions are in meeting rooms, boardrooms, training centers, break rooms, and common areas. In many cases, they are the responsibility of facility departments and are budgeted as fixtures/furniture.

If your organization already has these components, what is left to cost justify? Possibly very little additional expenditure is needed. The focus may be to ensure that the existing systems and infrastructure are able to meet the business requirements of the organization. Software updates or minor hardware updates may be enough to achieve the current goals, and are easier to justify than new purchases. Showcasing the functionality and sharing across business units will also lower the expense.

A good example of cross-functional sharing is the Government Training and Education Network (GETN), which has served agencies, such as the US Air Force, Air National Guard, Army, Navy, Federal Aviation Administration (FAA), Department of Justice, and National Park Service for more than 20 years.

GETN uses a common satellite carrier to share distance learning content and facilities. The GETN agencies can expand or enhance their specific offerings as needs dictate. Video production systems, program origination capabilities, and remote classrooms have been added or enhanced by many agencies to increase and extend learning. All agencies have upgraded their classroom systems to HDTV, with some extending the reach to desktops for short video courses either live or on-demand over their satellite systems.

GETN agencies find that the recurring costs for satellite transmissions, space segment, audio interaction, maintenance, and personnel are approximately 10 percent of residence instruction. The cost per student-hour via satellite is only \$4, whereas the cost per student-hour for in-residence training averages \$45 (including only travel and per diem costs).

Other organizations requiring regular training have achieved similar results. Distributed organizations frequently have employees who do not have a PC. These “deskless” employees need access to information using either a shared PC or an appliance that is accessible to them in the remote location. Making this information accessible to these employees without additional travel (employee or instructor) reduces costs and increases productivity.

Building the Business Case

The business case for video requires comparing the anticipated costs against potential savings and revenue increases.

Costs

To gather the anticipated costs, see what infrastructure you already have in place. Do you have content capture equipment and video editing tools? Do the organization’s standard PCs have built-in cameras and editing software? If not, look at the tools available on the market. Are there existing content management tools within the enterprise for managing Web content or other versioned material that could be repurposed to manage video files? Remember, digital video is a file that can be edited and updated similar to a word document or spreadsheet.

Content delivery is another area where you may be able to leverage existing systems, OR you may be able to develop an evolution plan. Chances are your company has a system in place to deliver software updates and patches to the remote sites. It is also likely that this solution takes a long time to distribute the standard updates and patches to the remote sites.

An alternative would be to bring in a system that provides new services. Often we see enterprises take advantage of this as an opportunity to justify the investment in a satellite multicast network. In consultation with a trusted service provider, you can review the costs and advantages of this option.

Remote site infrastructure can be as simple as an existing PC with a Web browser, expanding to include streaming playback and eventually the corporate DVR appliance that we referred to previously. These have varying costs and a service provider can help you review the costs.

Savings and growth

When building your business case, look to offset the costs in both savings AND business growth terms. Numerous studies show that the cost of replacing an employee is expensive and increases for employees with higher skill and experience levels. Generally accepted guidelines state that a front line, hourly employee will cost about 15 percent of their annual

salary to replace. This cost includes advertising, interviewing, and training a new employee. A \$10/hour employee will cost the organization about \$3,000 to replace.

How big is your organization? How many employees are leaving each month? Assume that you could reduce that impact by 1–5 percent and see how much savings are possible. Next, consider the value of communication to the employees. Does your organization send subject matter experts to remote sites to provide training? Do regional leaders provide messages, information, or training each time they visit the site? How often are they able to visit each site in their territory? What if you provided a system that allowed the regional leader to create a short video message each week and post that video message to a player located at each site. How much travel time would be saved? How much impact would the timely messaging have on business growth?

There are numerous examples of retailers using product training and information to improve seasonal item sales, for example. Typically, seasonal items have unique properties and a limited window to sell. We have seen retailers capture greater than 10 percent sales improvement of seasonal items when they utilize video training to prepare the sales organization for seasonal events. Pick a single item in your portfolio—if you could affect a 10 percent increase in sales, what would that equate to in additional dollars to the company? What would be the gross margin uplift of that increase?

Comparing the costs to these potential savings and revenue increases will give you the business case to invest in the enhancement or expansion of video infrastructure.

Summary

The numbers show that a typical distributed organization with more than 20,000 employees and revenues greater than US \$10M will have a compelling business case for the use of enterprise digital video.

Component costs of a video ecosystem are significantly reduced and organizations may have many of the elements (such as cameras, editing capabilities, and display screens) throughout the enterprise. To maximize the ROI and drive business results they can leverage existing systems and infrastructure by ensuring they have a management and distribution solution that's interoperable and delivers video content to targeted viewers, where they are and when they will view it.

When compared to the cost of PCs, laptops, tablets, smartphones, and other business and communications tools for employees, achieving a fully functional, effective enterprise-wide video ecosystem is affordable. Making a key point for the business case: How can the organization afford to not use video to communicate?

When you build the business case, you should keep the focus and objectives well-defined. We suggest you consider the following:

Make sure the video communication and workplace learning solution:

- Is available to authorized content providers, including marketing, communications, public relations, human resources, training, and learning groups, etc.
- Can be interfaced with all distribution channels for internal and external audiences.
- Make content readily and easily accessible to all targeted viewers.
- Is not repetitive and inefficiently performing in silos across the enterprise.

Further we suggest that you try to do the following in your internal research and planning:

- Leverage the cross-functional opportunities available through the smart use of digital technology.
- Leverage existing systems and capabilities to provide value for all departments and business units across the enterprise.
- Supplement and enhance the ecosystem with any additional systems and capabilities when and if needed (according to a roadmap and lifecycle plan).
- Give viewers what they need—video—when, where, and how they want it.

Look around the company and you will find that much of what you need is available already. Most importantly, start using video to communicate and watch how it grows the business, increases productivity, reduces costs, and creates a powerful culture of success.

About the Authors



Randy Palubiak

President, Enliten Management Group, Inc.

Randy is an industry analyst, a media business strategist and author of *Digital Touch Points: How to Gain a Competitive Advantage Using Video and Dynamic Media*, 2013.



Mike Tippets

Vice President, Media Services, Hughes Network Systems

Mike is responsible for the development and delivery of managed services, software applications, and other solutions based on digital media technologies.

Follow Mike's blog about digital media at business.hughes.com/blogs/digital-media.

For additional information, please call 1-888-440-7126
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11717 Exploration Lane
Germantown, MD 20876 USA

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