

When Words Are Not Enough

It's not enough to create a manual or job aid in today's "instant media" environment. Today's employees have grown up with and expect a rich media experience wherever they are. Your audience expects to be engaged and stimulated by the media they consume.

OK, so now what? How do create those rich media materials and experiences. Let's take a look at how this all came about, Then we can tackle the techniques, tools and technologies you can use to get the job done. We'll wrap up with a look at what's to come.

Cheap. Good. Fast.

We may actually have hit the point when we don't have to choose cheap or fast or good. We can almost get all three.

The cost of technology has dropped so much that creating rich media is in everyone's hands. (But that's another problem.) The stuff that enables today's video cameras are tracking Moore's Law pretty closely. The CCDs (Charge Coupled Devices) that make the pictures, the LCDs that display the pictures, even the chips and processors have enabled very powerful features. Fifteen years ago you couldn't get the same quality picture or all the features of today's \$300 camera for less than \$20,000.

The hardware advances have created a playground for software developers. The big enabler has been compression math. The theory had been figured out a decade or so ago but today's fast processors and fast hard drives have made it viable. And the same technology advances have led to user interfaces that can be made simpler and less complex. So, let's see. We've covered Cheap and Good. How about Fast?

There's no way to speed up electrical signals. But we're able to pack more information into the wires so things seem faster. Sending compressed digital signals over coaxial cable or fiber optics or over the air has led to the Hundred(s) Channels of programming our homes. Digital television will make more or higher quality channels available to more people. But it can't compete with cable or DSL or satellite. A little more than a third of the U.S. and almost half of Canada have broadband internet (and digital TV) delivered by cable television wires.

But what about wireless? Direct Satellite can transmit signals pretty quickly but it depends on standard telephone to receive instructions about what to send. Closer to home we have the various cellular telephone networks and, on the horizon, wide WiFi coverage. The "small screen" as the industry refers to telephones and PDA is the delivery platform for the future. It makes since nearly everyone has a telephone.

There is one more thing driving the rich media revolution. People. As businesses see the new opportunities there is a rush to control the “pipes” and the content inside them. The music industry has seen this as a threat and the motion picture industry doesn’t want to get caught flat-footed like they did when VCRs became standard household appliances. Broadcast television is also a big player. But it’s media consolidation that is having a big effect. Deregulation of the media landscape has been a contributing factor. But it’s not that just fewer companies are owning more media properties. It’s because they are.

Consumers are challenging the status quo. Ordinary people can now be creators of content that can be seen internationally almost immediately. Try that with a movie studio or broadcaster! Ultimately, it’s the bits and bytes and boxes that have made it possible but it’s people who have seen the possibilities.

But Nothing’s Changed

Even with all the changes technology has brought the basic discipline for rich media remains the same. We still need to pay attention to our audiences’ needs and the program or segment’s message and goals. Key to the audience’s needs are accessibility concerns like subtitling, translation or enabling screen readers or pointing devices. And key to the message and goal are evaluation. How did the program do? Web server logs provide some information but more detailed information about how the audience feels about the media has to be gathered some other way.

Plan, Plan, Plan

Like most things, rich media starts with a plan. An outline of the program is a starting point but written scripts and storyboards may be needed to share the concept with team members. Creating media is not a “Gee, I’ve got a barn, let’s put on a show!” effort. A production schedule and, in some cases, a budget, will be needed to know what’s happening when.

The best Hollywood motion pictures are simple stories. That’s a good lesson to remember. Keep the language simple. Break down technical language into plain English, even for experienced audiences. People are used to having conversations not be spoken at so keep it conversational.

Simple picture composition, making the main subject the center of attention, helps keep the audience focused. Sound is similar; use what is necessary to explain the concept but keep the complicated audio mixes for your next CD release.

When you put together your production schedule having just a few locations keeps the project moving and cuts down on dead time. But do what’s right to keep the information authentic; audiences, especially expert audiences catch on quickly when you fake it.

Size Matters

There are two kinds of size considerations for rich media. The first is length. Audiences are used to shorter program segments with shorter shots within the segments. Blame music videos. But keeping segments short and focused on one main topic makes it easier to repurpose. The second size consideration is height and width or screen size. Smaller screens mean that your main subject must be larger in the frame shot using close-ups. Delivery of rich media is moving to smaller and smaller screens. What might have worked on a 26 inch television probably won't work on a cell phone screen.

Classic cinematic editing techniques are your best friend. Current media creation software enables all sorts of special effects. They are not your friend. Use the most appropriate framing for each shot based on your goal for the program. Use basic transitions like cuts and dissolves. Even if audiences are used to shorter shots and faster pacing, shot pacing is ultimately dictated by the audience, the subject, your message and goals.

You: Media Expert

That sounds like a lot to know and remember. You should keep in mind that you know a great deal about how good media is made. And you how bad media is made. Use your common sense and try to remain objective or at least put yourself in the audiences' shoes. It's ultimately about them. And if you agree that you know a lot about good media your audience likely knows more. The audience for your media has likely never experienced black and white television or vinyl records or rabbit ear antennas. They are rich media natives and have strong opinions about how media should be. Pay attention be successful.

Creating good rich media is not brain surgery but it does require attention to detail and attention to people.

People have been making movies since before the turn of the Twentieth Century. So, like many mature industries there are certain disciplines and processes that are standard. Treatment of subject may vary but the production techniques used have been used for decades. When you first start don't try to invent the process. Find the best processes and techniques you can and steal them!

The Toolbox

What gear will you need? You can break it down into two categories: shooting and editing. Start with a camera. It can use tape or DVDs or hard drives or flash memory to record on. Get what you can afford and what will provide the best picture for your situation. Don't cheap out; get a high definition camera. These will be described as

recording either HD or HDV or AVCHD format. With your camera buy well made tripod. Small cameras are lightweight and easy to hold...unless you're holding it for hours on end. There's a place for handheld shooting. But don't allow camera movement distract from the main subject.

If sound is important get a small shotgun microphone. This picks up sound from directly in front of it and is good for both sound on location or narration recording later. Cables to connect the microphone to your camera and headphones to monitor the sound recording should be part of your production gear.

Virtually any current computer will work to edit what you shoot. The computer can be desktop or laptop but laptops allow you to take your entire production "studio" anywhere you may need to go. If you go the laptop route an external monitor is useful to expand your workspace. Last but not least in the hardware department are hard drives. Get the fastest, largest hard drive you can afford. Speed is more important than storage size when editing media. A disc burner, either standard DVD or BlueRay DVD, will be useful to store or present finished media.

The software you'll need often comes delivered on computer systems out of the box. Many computers come with video editing software pre-installed. Apple, Sony, Pinnacle, Ulead, Adobe and Avid are names to look for in editing software.

Showtime!

There are more distribution options than ever before. The old standbys like tapes and discs have been joined by online and wireless streaming. Let's look at your options and talk about the good and bad of each.

Tape and disc (DVD) are widely accepted and viewable by almost anyone on any continent as long as you use the right format (NTSC or PAL). Blue-Ray High Definition DVD will slowly replace standard DVD over the next few years. The video rental stores are unloading their VHS tapes as quickly as they can and the same will be seen for standard definition DVD. If you need to have a frozen in time version of your material and you have a choice lean toward DVD and Blue-Ray DVD over tape for distribution.

Online distribution is your most flexible option, although in many cases it can't deliver the picture quality that DVD or sometimes even tape can. By delivering your rich media as a downloadable or streaming file though you'll save on distribution and dubbing costs. You'll still have costs for disk storage space. Streaming files have an advantage over downloadable files in that you have greater control of who has a copy of your content. The other advantage of streaming rich media files is that you can place links to the files, in a player, on your site and other sites, making the material more widely available. For even wider distribution you can upload your rich media to sites like YouTube.

Streamed rich media can be made even more effective using RSS for subscription and syndication. This is essentially how podcasting works. People “subscribe” to audio or video podcast “feeds” and then when a new file is uploaded by the author the subscribers are notified and the new file can be automatically downloaded to their player. So in a documentation or training scenario you create a piece of rich media documentation and your users “subscribe” to the media’s “feed” using RSS. A few days or weeks or months later the procedure described in the media changes. You make the change and upload the new file and your user is notified about the new file or the new file is automatically downloaded. The next time your audience needs to see the file they will see the latest version. RSS can act like an automatic updating service.

Some Streaming Details

Streaming your rich media files has some hardware and software requirements. First you’ll need some way to create the file; your editing software will take care of this. Media files are much larger than documents so you will require enough storage for the original footage and the finished edited version. Think hundreds of gigabytes or better, terabytes. To upload and download streamed media files you’ll need high bandwidth connections similar to cable broadband. Some internal IT departments can be hesitant to have media file traffic on the same network as regular business data. The servers that store and deliver media files need to be optimized for that purpose. You can acquire these yourself or you can contract with a company who specializes in streaming media. Most media streaming providers also have specialized networks and data centers specifically designed to handle the high bandwidth traffic of rich media.

The last piece of the streaming solution is playback. Rich media files can be encoded differently depending on your editing facilities or the target computer. Apple QuickTime, Windows Media and Adobe Flash Video are the most popular ways to encode media. QuickTime and Flash are popular Internet formats; Flash is the format used by YouTube and most other video sharing sites. Windows Media is useful on an intranet since the Windows Media Server is often installed as part of an Enterprise Windows installation.

Once your media is streaming you can place it within training applications or as links within documentation. And it can be made available outside of the work environment for personal review or even to promote or demonstrate functionality or product.

Besides desktop or laptop computers, streaming media can be viewed or listened to on all kinds of devices. A player like the Apple iPod can have files loaded on it automatically using RSS and iTunes. It’s very portable and so it can go where the worker is. This would be handy in environments where having a DVD player and monitor aren’t convenient or even safe. So, the cab of an earth mover or on a shop floor or in the middle of a pasture your rich media could be immediately available.

Rich media can be streamed to any kind of screen attached to a computer. For more generalized material that isn’t specific to a job or function large LCD panels like those

found in airports for arrival and departure schedules can be placed where needed. In a play on retail's "point of sale" I call this "Point of Work". Screen can be scheduled to run standard rich media messages but can have specific, more timely messages "pushed" to them when necessary.

Peek at the Future

Remember what I said about DVD being useful to distribute rich media? Well, I would put your eggs in the "streaming" basket and use DVD as a secondary distribution media. Why? Because DVDs days are numbered. Two factors are causing this. First, was the development of Blue-Ray High Definition DVD. And standard definition media will be retired as international television systems convert to digital and high definition television. Even Blue-Ray has a relatively short life-span. Streaming media over the internet is predicted to overtake Blue-Ray as a distribution media in 5 years or so. So, stream first, make DVDs second.

Big Pipes

As streaming media and the technologies that enable it like compression gets better the next link in the chain are the pipes. First among those is Ethernet or CAT5 cable used in offices and to connect cable modems to home networks. These are essentially a kind of telephone wire. Coaxial cable, like that used to bring cable television signals into homes, can handle more signal like the kind needed for rich media. King of the cables is fiber optic but there hasn't been enough of it installed to connect home to the internet and it hasn't been practical or cost effective to install it in homes.

Wireless technology has the greatest promise to reach the most people and carry rich media signals. Include with wireless is technology like WiFi and its big brother WiMAX, but also cellular telephone. Media is streamed to telephone handsets today for advertising like movie trailers or in some cases entire movies.

Once you start streaming your rich media content wirelessly the world is literally at your fingertips. Now, your media can be exactly where your customer or employee is and can be available exactly when they want it. But there's one more thing.

I know who you are

Besides connecting directly to your audiences' subconscious location based distribution could be the next best thing. All computers, even those found in a cell phone, have an Internet Protocol or IP address. To use streaming media the user's computer requests the media. With that request comes the IP address of the computer they are using. on an internal network you can determine which desks or work stations request particular files most often. Powerful for you, creepy for the user when you walk up to their desk to "help" them with a problem they've been having. But it gets creepier.

Using GPS, or in a pinch, the cellular network you can determine the the physical location of someone not connected to you physical network. Powerful ability when managing training or procedures for field workers. There is one other little creepy thing. Actually, very little, as in very small. Riffid. Actually that's phonetic for RFID or radio frequency identification. RFID are tiny chips that can carry data and a small radio transmitter. They can be embedded or attached to almost anything. Walmart uses them to track inventory and purchases. With RFID you can tell who has checked out a particular tool and then, using a RFID receiver embedded in a device like an iPod, have the iPod request, through something like RSS, the rich media documentation needed for that tool or that activity. See, told you it was creepy. But cool and powerful at the same time.

So, What Do You Think?

Using rich media in your documentation or training materials may be completely new to you. It may seem complicated. It sounds like "one more thing I gotta do" right? Well, it is. Your audience (I like that term better than "users") is expecting to be stimulated and to some extent, entertained. That's their everyday life, not so different from yours. So, rather than do it the way you've always done it try incorporating some rich media and see what happens. Try it as an alternative to written procedure. If that works, replace the written material with rich media entirely.

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