38 VIDEO AND FILM-MAKING FOR EXPEDITIONS

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> The advent of the mini-digital video camera has changed the concept of expedition filming forever. The traditional 16mm film documentary, however much one might regret its passing, has already become a rare and costly luxury.
>
> JIM CURRAN, SEPU KANGRI EXPEDITION, 1998

Now, as never before, modern lightweight digital camcorders enable anyone to record an expedition. Mini DV digital camcorders, both the consumer and professional models, have proven themselves in all conditions and all environments. They have become the standard for remote newsgathering and cost-effective documentaries across the globe. Unless you are working on a professionally funded, high-quality film or television production, film is simply too expensive and complex a proposition for expedition filming. We are now well and truly in the digital age.

This chapter therefore focuses on the use of these digital camcorders and how to get the best from them on location.

In TV speak, producing and delivering a "film" is split into three easily distinguishable parts; these constitute the production process:

1. Pre-production: story development, research, treatment and script writing.
2. Production: location shooting and sound recording, producing the goods.
3. Post-production: editing, adding music, sound and possible narration.

IN THE BEGINNING: PRE-PRODUCTION

The moment that you decide to take a video camera with you on an expedition you are entering into the communications business. If you are unable to share your ideas and stories effectively, it is simply not worth trying to record your expedition or attempting to make a film. Without this most basic skill, your endeavours will invariably result in disaster.

Ask yourself what you are trying to achieve, what story you are trying to tell and how you are planning to tell it. Remember that the single most important piece of equipment for any expedition film-maker is the pencil. The more times you write out your ideas, the more times you can look at them objectively, rethink them and rework them. This shaping and developing is a very organic and dynamic process. The more experienced you become at this process, the more skilled you will become at "seeing" your story and your shots in your mind's eye. For those of you with a word processor the limits are endless!

Many first-time film-makers say: "I'm going to see what happens and record the expedition as it goes along." Invariably they return home with a bunch of disjointed video shots that will never edit together and don't make any sense.

Remember that the simplest ideas are always the best; people like watching people, "interesting people"! A short writing or journalism course might not be a bad idea either.

TABLE 38.1 **COMMUNICATING YOUR EXPEDITION: REFLECTIVE TO INTERACTIVE COMMUNICATIONS**

Communication style	*Level/activity*	*Impact on expedition*
Reflective	Observational and authored narrative film	Need to buy in from team
	Shoot footage, return home to edit and possible broadcast	Could deliver as a one-person band
Active	On-location editing	Need dedicated team members, two- to three-person job and good resources
	Sending news reports Producing video diaries	
Interactive	Location broadcasting	Full-on team at home and on location
	Web cams Email chat Video conferencing	Serious back-up
Event	Full interactivity, "media circus"	Big team Big back-up
	Live links into news programmes	Big "bucks"

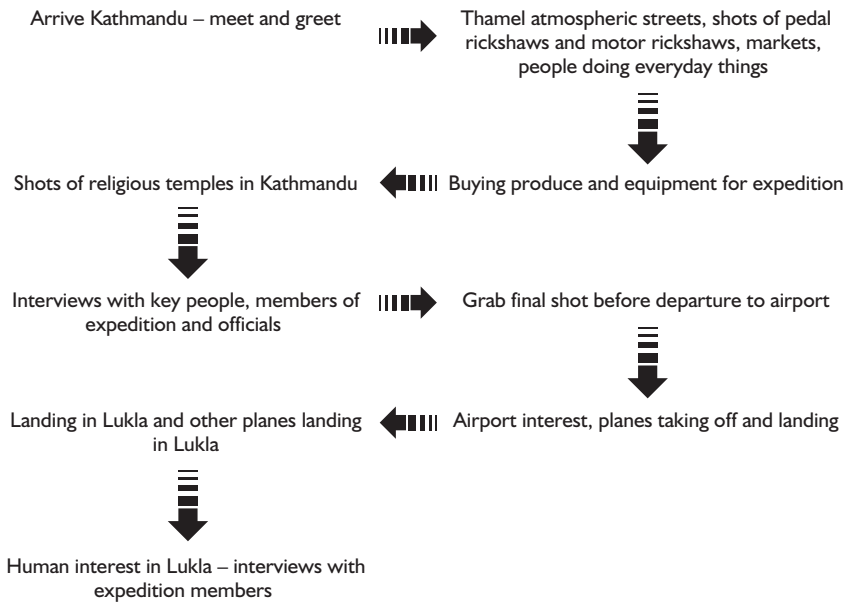

Figure 38.1 *Idea and production flow chart: filming expedition to the Khumbu region of Nepal*

The treatment

In professional television productions, the organic process of writing up your idea is called development; this is where you'll be doing extra research, finding out about where you are going and the things you will be seeing. Once you are happy with the idea, you need to write a first-stage document. This is known as "the treatment". You should need no more than one side of A4 to do this. If writing prose isn't your thing, try to construct a schematic flow chart, so that you can sketch out the idea. This can describe shots and sequences that you may wish to get on location. This initial concept will soon develop into your production flow chart (Figure 38.1). The good thing about doing it this way is that you can easily cross something out or add something as you go along.

Once you have asked yourself these simple questions, you should be able to fill in the blanks quite easily:

- What is my story?
- How am I going to tell it?
- Who are the main characters?
- What or who is of interest?

- Where do we want to go?
- How are we going to get there?
- What are we going to see en route?

It's a good idea to watch programmes that you really enjoy and analyse them. Watch them over and over again and try to understand how they are shot, or simply note down the shots that you really liked. However, don't choose a big budget drama, because you will be more than likely working with a very limited budget and have limited resources at your disposal. Reviewing and analysing travelogues and adventure travel documentaries is a great way to begin to learn the craft of expedition filmmaking.

If in doubt, KISS – keep it simple, stupid

If it is stupidly simple back home, it should still be relatively simple when you are on location with all the inherent complications of expedition logistics in a remote environment. Remember, you should be able to operate the equipment and shoot your "film" when you're tired, hungry or feeling too hot or too cold, and when both your cameras and your own batteries are running low.

Involving your team

It is important that you work closely with your expedition team from the outset and share with them what you are trying to achieve and the story that you want to tell. The effects of filming on your fellow expedition members can be enormous and may have a great impact on group dynamics. It is very easy to find oneself in a tense and awkward situation where animosity builds.

Are you going along as a constructive observer, or are you planning to make a film or programme where the subject happens to be an expedition? The former is not that difficult to achieve with a group of friends on an expedition, the latter is a full-blown production that will fundamentally change the nature and dynamics of your relationships with other expedition members.

When shooting a "fly on the wall" documentary or observational film, time, effort and energy need to be spent getting to know your subjects. You will need to build an excellent trust and rapport with the people before you "shove" a camera in their face. This is particularly important if you are going into an area where there are cultural sensitivities about filming, or if you are trying to make any anthropological observations. The better you know your subjects the better you will become at predicting what they might do next.

Managing the expectations of others is all important. You should always try and exceed people's expectations. Promising to deliver a broadcastable piece of television is a serious and "professional" (paid or unpaid) undertaking that requires commitment from yourself and a team of dedicated people. Be honest and realistic with

yourself and others about what you can achieve with the time and resources available to you.

THE PRODUCTION PROCESS

With your treatment and understanding of the production process, you can begin to write your production flow chart (see Figure 38.1). This describes what you need to do and the shots and sequences that you will need to film. Think of it as a "road map" for your production journey. It will show you where you want to go, how you are going to get there and hopefully what you're going to see en route. Refer back to this as often as possible and note down any changes as you go along.

Choosing your camcorder

Choosing the right camcorder for you and your expedition is a very important process. All too often, camcorder selection and procurement are left literally to the last minute, in the hope that one might be lent or given free. A camcorder is a complex piece of kit and film-making is a significantly more complex process than taking stills. Film-making is all about managing the moment, managing resources and being pragmatic about compromise. Don't compromise when choosing your camcorder.

Always get your hands on your camcorder as early as possible, and remember that, if you're going to visit a cold region, try out the camcorder with gloves. Make sure that the buttons are easy to see and use; the feel and positioning of the buttons should be intuitive and the rocking motion on most zoom buttons should be fluid and smooth from wide to telephoto and back again. Make sure that the closures around the recording mechanism (where you put the tape in) are good and secure, if there are gaps and you can see daylight, dust and water will easily get in.

The pros and cons

If your budget allows, always try to go for a professional camcorder. These are usually sold through broadcast or professional dealers and are not generally available on the high street. The additional investment is easily worth it because not only do you tend to get more rugged camcorders, but they will also have better sound-recording capabilities and functionality.

Chips with everything, singles or threesomes?

Image quality on small lightweight mini DV camcorders can differ dramatically depending on how many chips they have. The chips referred to here are "charged coupled devices" or CCDs. Small palm-sized camcorders tend to have only one chip; the slightly larger camcorders that you have to hold with two hands or rest on your shoulder have three chips.

Without getting too technical, the chip or CCD is responsible for turning all that the lens can "see" into electrical impulses. Three CCDs are better than one and larger CCDs are better at doing the job than smaller ones. If you are looking to develop your video filming skills or to produce any material that you will be showing to an audience whether by TV, web or lecture, go for a three-CCD camcorder. Single-chip camcorders are best for video diaries, undercover filming and when you're on the move, say on a cycling expedition, or for a summit dash on a big mountain; they are light, very portable and can be easily stowed in a warm pocket or secure pouch.

Doing it digital

If you are looking to tap into the world wide web or undertake a spot of home editing on a Mac or PC, going digital with a digital DV or DVCAM camcorder is the only solution. Modern digital camcorders can now be connected to other devices through a single cable called iLink (i333) or Firewire (Apple trademark). You can now literally plug and play!

Budgets

If you're on a seriously limited budget, there are fortunately a large number of Hi 8 and early digital video kits available on the second-hand market. Check camera dealers and the classified sections of video magazines. In the UK, the national photographic retailer, Jessop's, offers an excellent national search for second-hand equipment in their many branches. However, older camcorders may use NiCd (nickel–cadmium) batteries. Always check all of the batteries on a second-hand camcorder and view a freshly recorded tape on a TV or monitor before purchasing.

Many people looking to take a video camcorder on expedition think that it is a way of making money: "for sure we can get paid to make a film, there are loads of channels out there that'll want to buy our stuff", they say. When you go through the true economics, it is simply not the case. If you're lucky, you may be able to cover your costs.

The purist's way to fund your expedition film is to take on an extra job, do some overtime or live a frugal and monastic existence, living on the three Bs – "beans, bread and beer" – for a period before your expedition, and save the cash that you need. Remember that, if you start pursuing commercial sponsorship, you will need to be able to offer the sponsor something of value in return. The more serious the investment from the sponsor, the more serious the value of sponsor remuneration is needed.

A basic "catch 22" situation can easily develop where the film is used as a device to secure funds for the expedition, and the expedition cannot go ahead if the film is not made. Budgets quickly spiral. If you are going to accept commercial sponsorship, it is wise to sign a contract checked by your solicitors. Know what is expected of you and your expedition, regard this as a business proposition and deliver your obligations

accordingly. Be wary of so-called professional third party organisations that will broker deals for you.

Without doubt you should understand what you are taking on; do not let your ambitions, promises or desires run away with you. Remember these points: are you over-committing yourself and your team? Are you and your team media friendly and media savvy? What is your comfort zone?

In the field

If you're both physically and mentally prepared for your expedition, coping with the extra demands of filming shouldn't be too much of a problem. Try not to be over-ambitious when filming, and work well within your own comfort zone; this will allow you to get the shots that you have been looking for from the start. It is so easy to let yourself go, with dire consequences, e.g. when filming in the cold and taking off your gloves it is so easy to suffer cold damage to your fingers. If there is no one on your expedition to watch out for you, always set aside some time each day to make sure that you're fit and well. No matter how well your kit is, if you're not working properly, you don't have a film.

Managing the kit

Irrespective of the environment or location you are visiting when filming, you should "always use protection". Make sure that your equipment stays in good working order. The big hazards to watch out for are: extremes of temperature; water, especially salt water; and dust. Using a protective cover or housing will help in all of these cases and always make sure that you are not taking the camcorder from a cold to a hot environment quickly because condensation can easily build up.

- Heat: try to keep your camcorder out of hot vehicles; use a reflective insulation jacket.
- Cold: insulate your camcorder from the cold and keep the batteries warm. Heat packs can be useful; however, remember that they do not work well at altitude!
- Water: plastic bags and rubber bands help with light rain. "Ewe Marine" splash and waterproof housings work well up to shallow depths; then you need a full underwater marine housing. Silica gel (available at chemists and camera shops) is great for absorbing moisture; always take plenty.
- Dust: this is just as damaging as water, so undertake the same precautions and measures to stop it getting inside the camcorder in the first place.

Be fully familiar with all the display readings on your camcorder because this can help when trying to diagnose what is wrong and what you need to do. The more familiar you are with your kit, the better you able will be to do any maintenance and

running repairs. As with stills photography, make sure that you understand the fundamental basics of composition. Always keep the camcorder as steady as possible.

Always remember to check what you've shot against your original written ideas, treatment, script or flow chart; in this way you will be able to work out how you're progressing with your shoot.

On expedition many things occupy your mind. Always carry a small pocket notebook with you when filming; it's then easy to write your thoughts down as they occur to you and review them later.

Getting the shot

Next time you're at a tourist destination, watch people "videoing" the scene. Suddenly you find people turning their camcorders into Hoovers, trying to suck up "all the action", waving their camcorder from side to side, vacuuming the sky. Getting the shot is all about preparation and observation; it's an art and a craft. If you are used to composing shots for still photography, you are well on your way to shooting sequences with your video camcorder. The important thing is to shoot a variety of close-ups, mid-shots and long shots with what are called cut aways (shots that you can use in the edit to cut a sequence together). Consult a book on creative production to help you with this.

The basic idea is to keep your shot for at least 10 and preferably a minimum of 12 seconds. Don't zoom in and out and pan the camcorder too fast. The zoom is there to "frame" the shot; panning and zoom can be used to good effect to show a sense of scale only if you know how to put them to good effect! Panning from left to right seems to be inherently more pleasing, maybe because it follows the direction that we westerners read. To improve your shots, practise panning using a fluid head tripod and using the rocker button for zooming from wide to telephoto and back again.

Steady as she goes

Just as important as getting the shot is keeping it steady. You can do this by using a variety of devices: tripod, monopod, shoulder support or brace, Handyman stabiliser, beanbag or cord loop. A tripod is a must. There are many excellent lightweight, fluid head pan and tilt tripods available. Choose one that suits you and your pocket. A monopod is a good option because it eliminates vertical movement; shoulder braces do the job but can be rather cumbersome on expeditions. A stabilisation system is an excellent yet rather expensive solution to the problem of stability, the great advantage being that you can hold the camcorder on the top of the unit and "carry" it as if it was floating through the air – perfect for those shots of someone walking through a busy street or on a mountain path.

Beanbags are great if you are using the camcorder low down or want to strap it to a car or plonk it on a wall. With the cord loop, you place a loop around your boot that will tighten by itself, and attach the other end to the base of the camcorder. If you

have adjusted the length of the cord correctly you should be able to create tension in the cord by pulling up the camcorder and that tension should hold it steady! A stable camera significantly improves the quality of the resulting image; most camcorders now have image stability systems built in. For technical reasons, optical steady shot systems are always better than electronic steady shot systems, which tend to degrade the image quality.

Capturing sound

All too often, video sound quality is sacrificed for "the shot" or simply forgotten about altogether. Sound recording is one of the most under-regarded, yet one of the most important components of your film. Your eye is very forgiving; you can endure and even "enjoy" poorly lit, slightly out of focus, "atmospheric"-looking footage of people on expedition. When it comes to sound quality and the listening experience, your ears are almost totally unforgiving. Poor sound quality basically says a poor film. Always try to use a microphone other than the one built into the camcorder. The onboard camcorder microphone is in the wrong place, and can pick up camera noise, and is not designed for interviews or recording sound in "detail". Be aware of any background noise, use headphones to check or "monitor" the quality levels of the audio. Try to use good quality headphones; however, if your production is constrained by budget, Walkman-type headphones are adequate. Avoid fully encased headphones when on expedition, because you will not be able to hear anything going on around you, especially important when working in a mountain environment, on a boat or near a busy road.

To record crisp clean sound for an interview or a specific activity, you need a directional microphone that you can point at the subject. There are two types of these directional stick mikes: condenser or dynamic. Condenser microphones need power; usually they get it from the camera, a "phantom" power supply or, alternatively, they need a separate battery. Dynamic microphones don't need extra power and tend to work better in extreme humidity and really bad weather. You can also use a lapel microphone for interviews. These are easy to hide and can be positioned very near to the face of the person and so pick up their spoken words clearly.

Professional microphones have a special type of secure socket called an XLR (eXtra Long Run or eXtra Low Resistance) audio connector, designed for public address work. To get an XLR connector to fit a consumer camcorder, you need an adapter. A popular unit for allowing you to use professional XLR microphones on a consumer camcorder is a BeechTek box. This little device allows you to use two professional microphone sources and put them through a standard "phono" (Walkman-size headphone connector) input on your camcorder.

Whatever type of microphone you choose, you should always use a wind gag or "fluffy dog"; the number one company that produces these is called Rycote.

When you need to get your microphone in close to your subject, you can use

either a "pistol grip" to attach to your stick microphone or a boom or "fish pole". A telescopic trekking or ski pole with a small universal clamp or even gaffer tape can easily substitute for a proper boom. If using a boom the person holding the pole should wear good headphones, so that they can monitor the "quality" of the sound, making sure that they are pointing the microphone in the right place and that the sound doesn't "spike" or go off the recording scale. Take extra cable for both your microphone and headphones, because the person recording the sound can sometimes be a few metres away from the person with the camcorder.

And then there was light

Modern camcorders have an amazing ability to record quality images in very low light conditions. In general, small lightweight camcorders are better in these conditions than in very bright sunlight. High-contrast bright light is bad, low-contrast soft even light is good. This is the result of the way that the imaging chips or CCDs of mini DV camcorders convert the light energy into electrical impulses.

When in very bright light try diffusing the light as much as possible by using a neutral density filter; this limits the amount of light entering through the lens. Good quality camcorders usually have them built in. Try to use whatever available light you have to illuminate a scene. Video lights can prove to be very useful, but beware of them creating a harsh look on your subject when the lights are fitted to your camcorder.

Power

Without power, your electronic camcorder simply will not work. Without a working camcorder you simply will not have a film. Good energy management is vital.

Batteries mainly fall into two types: primary, single use, non-rechargeable cells and secondary, which are rechargeable and multi-use. Primary batteries, especially lithium cells, are excellent for expedition filming; they hold their charge longer than secondary cells and work well in very cold temperatures.

The most common rechargeable batteries being used in older camcorders and battery packs are NiCd. NiCd batteries develop a memory effect if not drained as low as possible before recharging, e.g. if you use it 15 minutes, then charge it over and over again, after a while you have a 15-minute battery. Next comes nickel–metal hydride (NiMH) batteries, which give you longer usage between charges and can be charged whenever you like with no danger of developing a memory effect. Finally there are lithium ion (Li-Ion) batteries; these have the advantages of NiMH batteries as well as being thinner and lighter than the others. Unfortunately they are usually much more expensive. Lead acid batteries must be fully recharged after each use, just like a car battery. Leaving them uncharged for long periods of time can ruin them. Even while being stored, lead acid batteries must be occasionally charged.

Another consideration with batteries is to have them either mounted on, or

within, the camera or off camera. On camera works best because you don't have any leads or cables to a separate battery pack or battery belt, which can easily become tangled in other equipment, especially climbing gear. Last but not least, remember that cold kills batteries. In such conditions, halve or even quarter the standard continuous recording times stated on the battery by the manufacturer. Always remember that you are using valuable battery power when zooming the lens in and out while framing your shots and also by just leaving the camcorder on standby mode.

Taking charge

With primary cells there are the environmental considerations of disposal. Where possible they should be brought back to your home country. Many less developed countries just do not have the infrastructure to dispose of your batteries in an appropriate way. When charging batteries you have many options: wind and water turbines, solar panels and liquid fuel generators. Modern solar panels packed with voltaic cells are super-efficient and you can now charge batteries in most conditions. Always try to take sufficient fully charged secondary or sufficient primary cells for your recording needs; total reliance on recharging a couple of batteries is risky.

Taking stock

The question of how much tape to take is just the same as the question photographers ask about how much film to take. You should be able to answer your question by checking how much you can afford to buy, how much you can afford to carry, how much power you have and what type of film you are making. The minimum should be 10 hours of tape for a 1-hour film, or preferably a half-hour film! Keep your tape in a waterproof, airtight container inside a larger Peli Case, and always mark the tapes that you have shot

THE CUTTING ROOM FLOOR

With digital production and the relatively low cost of computer processing power, home editing on a Mac or PC has become a serious reality. There are many cost-effective solutions available on the market; however, remember that the kit doesn't do the storytelling and great editing hardware and software don't necessarily lead to a great edit. If you can afford it, use a system that has "DV compression"; this simply means that the type of digital information that it is processing is the same as the DV digital information recorded in your camcorder. Firewire or iLink enables you to transfer DV footage directly from your camcorder to your editing computer. Try to avoid all the "special" effects supplied with the system; editing is all about pace and the craft of storytelling, not about how many dazzling effects you can string together within a short sequence!

Line up, line up

On modern computer-based editing systems you will see the words non-linear. Non-linear editing means simply editing not in a line. Today you can start building your story at any point you wish: start at the end and work backwards, start in the middle and work outwards. Imagine non-linear editing as playing with a pack of cards. You can create any sequence that you wish from the cards that you have in front of you; if you don't like it you can always shuffle the cards and start all over again! However to ensure good storytelling many editors still work from the beginning.

Bringing it home

Most expedition films are rarely completed, and of the limited few that are, many are never broadcast. The expedition films that do hit our screens are mostly broadcast 6, 12 or even 18 months after the expedition is over. This hardly makes the expedition newsworthy and for many sponsors the time lapse is just too great. By harnessing the amazing power of satellite phone systems and a couple of boxes of relatively easy-to-use hardware and software, live or "near live" transmissions can now be performed from almost anywhere on earth.

Telling the world

In recent years the media business has changed beyond all recognition. To most viewers, things look virtually the same; however, we are now living in a truly multi-channel and multimedia world. The good news for those interested in expeditions is that there are now channels dedicated to the subjects. The potential distribution outlets for professionally made films featuring subjects that are in demand are numerous; however, trying to sell a completed film in this way doesn't guarantee any results. It is a very risky process, so you should try to obtain funding or a "commission" up front.

The potential outlets include:

- broadcast: terrestrial, cable and satellite channels or web streaming
- sell-through on video or DV: specialist distributors; specialist retailers; direct mail.

The following are other ideas worth considering.

VNRs

Video news releases (VNRs) are short (i.e. under 3 minute) pieces about a given subject, which are given to news organisations, broadcasters or "magazine" shows that may be interested in your story. Through this process you may be able to secure exposure and be able effectively to promote your expedition and fulfil any sponsor "requirements" without making a full-blown film! You can also use these video sequences on your website.

Going local

It shouldn't be too difficult to get involved with your local regional television station or news provider. Almost all have an early evening magazine programme that combines news, features and chat. Try to secure a feature slot in their show before and after your expedition. If you have the resources at your disposal you could even do a live link. Securing local airtime and exposure is how many well-accomplished film-makers started out; start small, with a big vision.

EPKs

Electronic press kits (EPKs) are not that dissimilar to VNRs; however, they tend to be less "newsy" and may promote a sponsor or organisation a little more. If a VNR is news, then an EPK is more PR (public relations). Again they should be short and well edited, supplied on at least a Beta SP tape, and be accompanied by still photographs on CD-ROM or DVD, an article and accompanying notes.

Web-wise video and location broadcasting

Satellite phones provide the widest range of options for expedition communications. Their ability to provide both mobility and continuous communication links in the remotest of locations makes them an extremely valuable, if not essential, piece of equipment for anyone operating in areas beyond the reach of regular communications.

The most commonly used satellite system for simple voice and data communication is the INMARSAT Mini-M system. Mini-M phones are both extremely compact and weigh about 2 kg and so provide high-quality mobility with 98 per cent land mass coverage. The system does not work above 70° of latitude, north or south, so it is not a useful form of communication for Antarctic and high Arctic expeditions.

Mini-M phones provide high quality and relatively inexpensive international voice, fax and email transmission at current rates for around $US2 per minute. However, as data connections are only up to 2.4 kbps, large data communication and internet access is not really practical. To send and receive relatively large data files such as stills and very large files such as video, the INMARSAT M4 system is required. At around three times the price of the standard Mini-M system, it does seem rather expensive, but the system offers high-speed data services with connections up to 64 kbps.

The central components that make field video and stills communications viable over satellite phones is the ability of modern compression systems to reduce file sizes and then squeeze images and audio down the system without any real loss in quality. Compression makes the data smaller, and so less expensive to store; it also makes it much easier to send around networks and systems.

The actual size of the data file to be transmitted depends on the required quality of the resulting footage: the higher the quality, the higher the video encoding rate

(Mbps) and the larger the file that is recorded, therefore, the longer the transmission time. Normal "broadcast quality" material is around 2.5 Mbps MPEG, which, using a single M4 terminal at 64 kbps, would take 40 minutes to transmit 60 seconds of video footage. Obviously, this has not only huge time considerations, but also huge cost implications when, at current prices, the rate is about $US7/minute, e.g. at $US7/minute a 2-minute VNR would take 1 hour 20 minutes to transmit and cost around $US560.

The greatest problem of using satellite communications is political rather than technical. Some countries are very sensitive about satellite communications and tend to ban the use of such equipment and communications in their country or territory.

Encoding, crunching the numbers

To get your DV film on to the web, you have to make it available in a web-friendly format. This is where encoding comes in. The three most popular video streaming media players are Apple QuickTime, Microsoft Windows Media Player and Real Networks Real player.

Always try to provide links on your website to media plug-ins for the different media format players and, most importantly, check that all the links work!

Consider a web version when you're shooting an expedition film, a web version being one that is more suitable to watch on a computer screen when the video is being streamed over the web.

Web video top tips

When shooting a presenter or interviewing someone close up, get them to wear neutral solid colours; this helps with the compression of the image. Try to avoid stripes or patterns and really strong colours such as reds and yellows.

When viewing encoded video that will be used for web streaming, view it on a computer screen, and find out for yourself what works and what doesn't.

Remember that web video is viewed at only a small size, so long static shots work best. Use long close-ups where possible. Quick cuts don't compress well, so concentrate on video content, not video effects.

Research and test the variety of Internet Service Providers (ISPs) available to you and then test again the one that you finally choose.

Where possible use a dedicated media server for your video material and make sure that their capacity is sufficient for your needs, or understand the limits and capabilities of the server and work within them. If a large company sponsors your expedition, you could always develop a subsite of their corporate site and ask if their IT team can do the work.

Road test your connections beforehand by uploading material to the site and server before you depart on your travels.

As connection speeds to the internet increase, more creative and complex

productions will be deliverable via web streaming; until then, like all good things, keep it simple.

No matter what type of communications you plan to undertake on location, you will need a dedicated, hard-working team back at base to make sure that your reports are coming in "loud and clear" and that all your hi-tech gadgetry works.

AND FINALLY ...

If you decide to take up the challenge, remember, even when you've got the kit, you are still a world away from producing a well-crafted, witty, intelligent and engaging film! As with most things it is "one per cent inspiration and ninety nine per cent perspiration".

FURTHER INFORMATION

Lists for everything

An easy and convenient way to manage and keep a track of everything is to produce lists.

List 1: kit list – the basics

Camcorder
Wide-angle lens adaptor
Filters, polarising, neutral density, skylight
Filter wrench

Synthetic lens cloth in pouch
Lens cleaner
Fluid head pan-and-tilt tripod
Steadying foot cord
Beanbag
Headphones
Lavalier microphone
Shotgun microphone
Microphone cables
Microphone boom or pole
Tapes
Spare batteries
Mains charger
12-volt charger
White balance sheet
Notebook
Pens and pencil
Carry case
Camcorder pouch

List 2: spares and repairs

Spare filters
Super-Glue
Gaffer tape, lots of it!
Watchmaker's screwdriver that fits the screws on your kit
Multitool, Leatherman or similar
Clear plastic bags
Silica gel
Cable ties, assorted sizes
Elastic bands, various lengths and widths
Jubilee clips, assorted sizes
Bulldog clips, assorted sizes

Useful addresses: contact details

Camera Care Systems (case manufacturer and supplier), Fotolynx Ltd. Tel: +44 117 963 5263, fax: +44 117 963 6362, email: info@ccscentre.co.uk, website: www.ccscentre.co.uk

CKE Distribution (professional equipment dealer). Tel: +44 1274 533996, fax: +44 1274 533997, email: info@cke.co.uk, website: www.cke.co.uk

CP Cases (case manufacturer and supplier). CP Cases Ltd (London). Tel. +44 20 8568 1881, fax: +44 20 8568 1141, email: info@cpcases.com, website: www.cpcases.com

Digital Reproductions Limited (video duplicator and tape supplier). Tel: +44 1274 688068, fax: +44 1274 688071, email: sales@digital-reproductions.co.uk, website: www.digital-reproductions.co.uk

Inmarsat (satellite communications organisation). Tel: +44 207 728 1504, fax: +44 207 728 1179, email: information@inmarsat.com, website: www.inmarsat.com

Integrated Communications Solutions (satellite communications supplier). Tel: +44 1844 260560, fax: + 44 1844 339091, email: info@icomms.com, website: www.icomms.com

Kendal Mountain Film Festival (adventure film festival). Tel: +44 1539 725760, fax: +44 1539 734457, email: info@mountainfilm.co.uk, website: www.mountainfilm.co.uk

Optex (professional equipment dealer). Tel: +44 20 8441 2199, fax: +44 20 8449 3646, email: info@optexin.com, websites: www.optexint.com, www.optexdirect.com

Peli Cases (case manufacturer and supplier). Tel: +44 161 832 5335, fax: +44 161 833 4488, email: (UK sales): sales@pelicases.co.uk, (UK support): support@pelicases.co.uk, website: www.pelicase.co.uk

Prokit (professional equipment dealer). Tel: +44 20 8995 4664, fax: +44 20 8995 4656, email: enquiries@prokit.co.uk, website: www.prokit.co.uk

Rycote (equipment manufacturer). Tel: +44 1453 759338, fax: +44 1453 764249, email: info@rycote.com, website: www.rycote.com

Solar Century (solar panel manufacturer and supplier). Tel: + 44 20 7803 0100, fax: + 44 20 7803 0101, email: enquiries@solarcentury.co.uk, website: www.solarcentury.co.uk

Sony Broadcast (professional equipment manufacturer). Tel: + 44 1932 816000, fax: + 44 1932 817014, website: www.sonybiz.net

Total Audio Solutions (professional audio equipment dealer). Tel: +44 1527 880051 (24 hours), fax: +44 1527 880052, email: sales@totalaudio.co.uk, website:www.totalaudio.co.uk

West Herts Media Centre (runs adventure filmmaking courses and hires equipment). Tel: + 44 1923 681602, email: mediacentre@westherts.ac.uk, website: www.mediacentre.westherts.ac.uk