'Automatic Smile Shutter', etc.) they do not give serious consideration to audio quality. Even so, a non-professional camera can be a satisfactory backup device provided it can take some kind of external microphone (this may be via a 'hot-shoe' for a dedicated camcorder microphone and/or a TRS mini-jack; but remember that the latter can result in problems with static crackle from longer microphone cables as mentioned in §1.2.2.2(i)). We have had good experiences with a bottom-of-the-range professional camera which had XLR audio (the 'Sony DSR-PDX10P') and which was only marginally more expensive than the topend consumer model at the time.

Choosing a camera as the master recording device does not mean everything has to be recorded as video. It may not always be possible or appropriate to film, for example because of low light or community/individual sensitivities about what should be filmed. In such cases the camera can simply be used with the lens cap on as a high-quality audio recorder.

Even more than with audio equipment, video cameras have many different settings that can be relevant for recordings and they are capable of a bewildering range of error messages: do take the manuals to the field.

1.3.1 Things to consider

Unlike with current audio recorders, it is still common for good-quality video cameras to record to digital tape rather than to hard disk or flash memory (i.e. solid state). Although this is changing, DV and HDV²⁵ tape will be around for some \$\display\$ time as a common, affordable recording medium. This raises two important considerations. First, it requires a time-consuming (i.e. real-time) capturing process to transfer the data to disk. Second, one may therefore be tempted to put this task off. But at some point suitable cameras and tape decks will become obsolete and then un-transferred material risks being left unconvertible, so tapes should be captured to disk as soon as practicable. ²⁶

Hard-drive and solid-state cameras might seem a better option in this respect, but they provide their own hazards in terms of file format, quality, and specification. The problem is that in order to save disk space they typically transcode on the fly to some more compressed format than that used by the standard tape formats, for example to a version of MPEG2 or AVCHD. There is nothing inherently wrong with this (except that these formats often need transcoding again before they can be handled in mainstream nonlinear editors, or in other player applications, e.g. ELAN²⁸). But, particularly for consumer-range machines, it increases the risk that the data is being recorded in what turns out to be a non-standard, non-popular format/version which will need to be expertly transcoded at some stage to prevent loss of quality and maintain long-term playability. The topic of data conversion and preservation is discussed further in the next section.

1.3.1.1 Recording resolutions

Unlike with audio files, the goal of creating uncompressed video is not currently feasible—the quantity of data required is simply too great for standard data storage mechanisms. This is particularly the case with high-definition video which is gradually superseding standard definition. Even compressed video can be a problem: an hour of recording in standard MiniDV format consumes about 13 Gb—too large to be archived on a standard DVD. With newer technology (e.g. single sided Blu-Ray disks can accommodate 25 Gb data) and the increasing affordability of large hard drives, this problem is to some extent diminishing, and there is a case to be made for backup copies being made in the original format. Nevertheless, at present compression is often necessary, at least for delivery of the content, and the aim is to find a format and standard that entails minimum loss of data while remaining open and well supported. We suggest referring to large linguistic archives such as DoBeS or PARADISEC for recommendations. ²⁹ In our project \$\(\pi\) we follow DoBeS specifications (and software guidelines) for creating MPEG2 and MPEG1 versions from DV tapes.

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