



Figure 7.1 Up until the 1970s the only practical way of getting a television camera into the field, and supporting it once it got to its location, was to install it in a truck. We have already elaborated on the fact that cameras used to come as three fairly heavy pieces of equipment: the camera head (the part of the camera visible in this photo), a camera control unit and a power supply. In addition it took one other piece of equipment to make the camera work, a "sync" generator. Until the late '60s, high-end cameras couldn't create images by themselves without a half dozen "drive" signals from that generator.

Figure 7.3 Left: In the early 1970s camera heads and their associated electronics got small enough that the television camera could replace the film camera for some television productions. The argument was made by television equipment manufacturers that if the production was going to end up on a television screen, why not shoot with a video camera onto videotape and not use film? Although until quite recently film quality (16mm and definitely 35mm film) had much better quality than the best television camera, today with high-definition television the two are very close in quality. Television stations used to all have facilities for playing back film, but most could only handle 16mm, and the specialized cameras that captured the light coming out of the projector's lens was no better in quality than other high-end broadcast cameras. (Source: Jerry Hughes)

Other Ways of Doing Remote Production

Divorcing the Camera From the Truck

Throughout our book we have focused on the big remotes and their complex requirements. With the advent of handheld cameras and one-piece camcorders, along with compact microwave transmitters, the remote had the ability to become a one-man band. Today, the largest number of remotes on any given day are the live shots in the station's local newscast. Utilizing a small vehicle, mast-mounted transmitter, onboard editing and a camcorder, virtually anything can be quickly transmitted to the public live.

Switch the small vehicle to a helicopter and the most mobile of image gathering machines takes shape.

But unless a film cameraman adopted a video camera for use, most television production folks used different production techniques because of equipment limitations. The result would usually look different and have a different feel than a film shoot, unless the television folks were willing to learn a new bag of tricks. One problem the television side had, and in some circles still has, is the best technical quality possible mantra.

This manifests itself foremost as "the sharper the picture the better," and "something in every shot better be white, and something black, if at all possible." This can defeat the effect that the director, lighting director

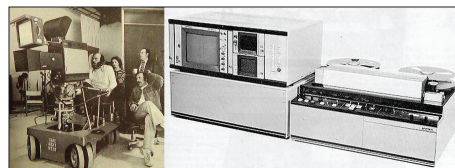


Figure 7.2 Although low-end television equipment could be put on carts or tables to create a temporary production "facility," it wasn't until the mid-70s that broadcast quality equipment could be used to do the same. It also took the invention of a computer-based videotape editing system before television could seriously be considered for "film style" shoots, where a camera, sometimes two or more, all shot raw footage that was edited after the field production was done. After-the-fact editing is referred to as "post-production" or simply "post," and film-style production is generally called electronic field production (EFP) by television people. Here a studio camera is on a dolly and pedestal that would usually find a film camera atop it. This type of dolly allows for smooth camera tracking. Film-style camera shooting usually involves physically moving the camera instead of changing lens focal length to change the distance perspective. The VTR on the right is a two-inch quad. This was the first high-end VTR that could actually be set up on a cart or table.



Figure 7.4 By far the most location production done by television stations is for news. As soon as news departments discovered that a shoulder-mounted television camera and a portable VTR with a handle (3/4-inch Umatics to begin with) could be used in news gathering, their 16mm film cameras were quickly replaced. Often the money saved on film and its processing paid for this new equipment. The video camera, VTR and editing equipment, along with the introduction of the microwave truck, led to electronic newsgathering, or ENG. The amount of film that could be physically processed each day limited the number of photographers that a station could put in the field. With videotape, and no processing bottleneck, instead of a few photographers, stations in large markets could put one or two dozen on the street. News up until this time was a money losing proposition, as there just wasn't enough content gathered each day to do more than a half hour show a couple of times each day, yet the central infrastructure of a news department had to be maintained. With video cameras and videotape content poured into the station, now news could fill many hours of the station's daily program schedule.

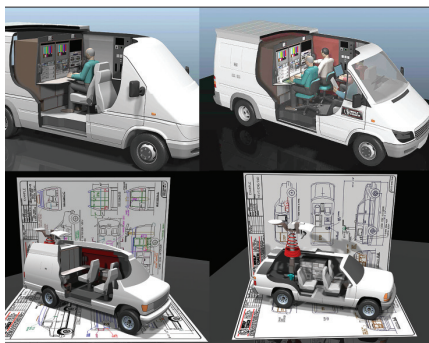


Figure 7.5 Production trucks come in lengths of less than 20 feet, and can even fit in a standard-size parking stall. The top two trucks allow multiple handheld cameras, often borrowed from the station's news department, to be used in small productions such as videotaped public affairs shows, and in some cases for commercial production, allowing the commercial spot to be edited on the spot and approved by the client. These trucks are designed so that only one person is needed, but they usually have provisions for two or three. The bottom two trucks have extendable masts for microwave transmission back to the station. These trucks often have modest production infrastructure, and sometimes can match the top two production trucks in production capability. Television stations might have both types of trucks if there is enough work for a microwaveless truck. Small trucks flourish because small means less: less money and simpler logistics for operation. (Source: Wolf Coach)

and director of photography might be after. Film often uses extremely low levels of light and filters to soften the look and bathe the set with a color temperature such that nothing is white. Video operators historically would end up in hot water during most television productions if the cameras under their care produced such video. This is not to say that there aren't video operators and engineers that can distinguish between the desired look, and simply a sick camera.



Figure 7.6 News events can become fairly large remote sites as numerous television news organizations converge. As we mentioned, some microwave trucks have modest production capability. Satellite trucks often have enough production capability to produce a complete show, not just a "live shot." Although, as the upper left photo demonstrates, a satellite uplink truck can be had that aspires to nothing more than taking a signal and getting it up to the satellite. (Source: Wolf Coach and Sandorse)

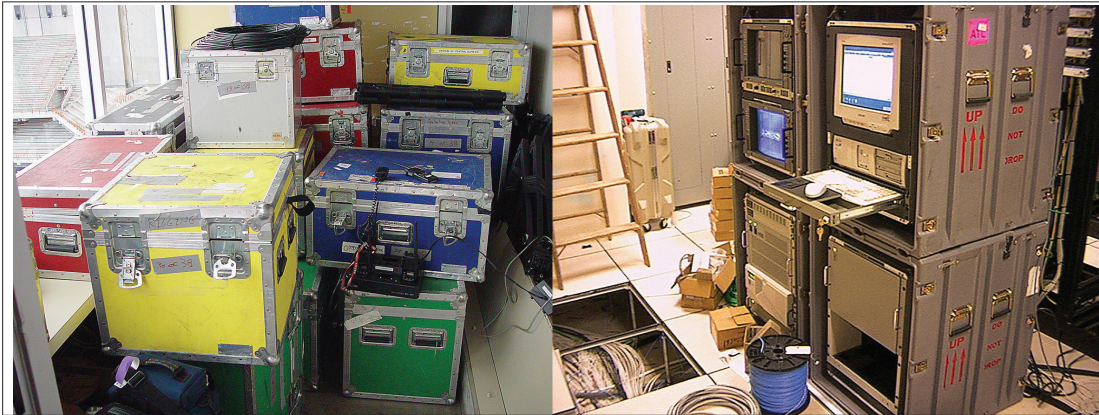


Figure 7.7 Remote productions can come together in many ways. Often fairly large ones are done that involve a vehicle only as transportation to the site. Equipment can be packed up in cases and assembled on site, or for a more sophisticated approach, in "flight" cases, as shown at right. The flight cases act as portable racks that have equipment installed just as a rack would. The various flight cases would be interconnected via a slew of cables, or cables bundled together into "snakes" to facilitate faster hookup.

Most newsgathering is simply a photographer, and maybe a reporter, shooting raw footage of interesting events, carnage, interviews and reporter standups for editing back at the station. They bring the tape back to the station where an editor turns the raw footage into a one- or two-minute story. Sometimes, especially if the story is a big one and will command more airtime, the reporter might "direct" the editing process. In many stations the photographer puts on an "editor's" cap back at the station and edits the piece shot in the field.

In this section we looked at the ability to do remotes with nothing more than small vans, flatbed trucks, tractors, or simply with equipment packed in cases. With these methods we can get equipment to places the 53-footers can't go. In the next three sections we will look at remotes where if the equipment arrived only in cases, setup for an annual event would have to start a day or two after teardown. ■





Figure 7.9 As we have seen a number of times earlier in the book, separate remote productions at the same venue often feed each other, as is the case here. Here a corporate production has on-stage projection displays to support a live television production. Since most of the sources used are computer-generated, this flight case remote uses analog video component gear. Any sources not analog component, such as feeds coming from the main production truck, must be converted to analog component. The center inset photo shows a few of the high-powered projectors that serve as outputs for the flight case remote. The switcher seen in the left photo switches analog component video. Since the "projection" remote provides sources to the main production remote, and vice versa, the directors for each remote (often one does both) must make sure that no video feedback occurs, as would be the case if a camera had a shot of a projection display that had that camera as its source.

Figure 7.8 Flight cases can be used to turn a vehicle that usually has a different mission in life into a temporary remote vehicle. Here a snow cat is converted to a remote production vehicle for the 1984 Winter Olympics in Sarajevo by strapping flight cases into place. (Source: A.F. Associates)



Figure 7.10 Here is a very unique "outside broadcast" system. Built for religious broadcaster Rex Humbard, the wheels used to get this system anywhere in the world included 747 landing gear. The system was built around four standard air-shipment modules, or "igloos," that would fit into a 747 fuselage used for cargo, since shipment via air was considered the most restrictive. The system also often traveled by ship — in fact, these photos are taken from a venue in Sydney immediately after a voyage through a typhoon, which dumped a couple of the containers on their sides. The final leg of the trip to the destination was usually via flatbed truck. The system supported three studio and three handheld cameras, along with three "quad" two-inch fixed VTRs and three portable quads. Each igloo had dimensions of seven by 10 feet, and was approximately seven feet high at the highest point, providing 440 cubic feet of space inside.