



Photo courtesy of SWE-DISH.

The past, the present & the future

In 1982, when cameraman Bernard Hesketh first used an electronic camera to capture events in the Falklands war instead of on film, it was clear that a new form of newsgathering was going to change the world of journalism. Electronic News Gathering (ENG) was to be a turning point. Helen Jameson reports.

Traditionally, the use of film in news gathering had meant that the turnaround time on a story was lengthened considerably as all film had to be processed. Video saw a move away from the use of film as it was quickly and easily edited. The remote signal was then backhauled to the studio by terrestrial microwave signals giving immediate delivery of news.

Satellite communication had become possible during the 1960s but it was not until the 1970s and 80s that news gathering became more developed seeing a graduation from analogue to digital modulation which in turn saw newer technology coming to the fore.

ENG was used to report landmark events such as the assassination of Lord Mountbatten and the Iranian Embassy Siege. However, nowadays, it has become the norm to actually experience events

in real time, to actually witness the breaking news.

In our 24-hour, 7 days-a-week society and with a population with an insatiable appetite for knowledge, ENG has given way to SNG – Satellite News Gathering.

Satellite comes of age

The Asian tsunami, hurricanes Rita and Katrina, the Iranian earthquake, the ongoing Iraq war – all have been covered through the use of satellite technology where mobile communications equipment is used for news broadcasting on a global scale. SNG is usually made possible through the use of vans that are equipped with two-way audio and video transmitters and receivers in the form of dish antennas. These dishes are aimed at a geostationary satellite and the



signals are beamed between the satellite and a control room that is run by the broadcast station or network. The result is that pictures and reports may be broadcast from almost anywhere in the civilised world.

Guy Pelham, Live Editor for BBC News, oversees satellite newsgathering. Interviewed for this article, he acknowledges the huge transformation that newsgathering has undergone since the advent of the first satellite dishes to the type of kit that is used today. "A few years ago satellite dishes literally weighed a tonne. Now equipment is smaller, lighter and more transportable. Teams can take the technology into the field and report more effectively from around the world". The advance in antenna technology is quite remarkable. For example, Gigaset now manufacture two antennas that weigh in at 24.8kgs and 29.4kgs meaning that they can now comply with airline baggage restrictions. These flyaway antennas further break down so that they may fit into flight cases for transportation, each weighing under 10kgs each. Gigaset's largest antenna may be broken down into just five flight cases and can be re-assembled at its destination by two people in less than 30 minutes.

There has also been a reduction in the use of personnel required to operate the news gathering equipment. In the past, highly skilled technicians would have been a prerequisite for operation of the relevant equipment. Now, the equipment may be operated at the push of a button and dishes are automatically programmed to seek out a satellite, eliminating the need for manual operation. However, things can and do go wrong so it is important to keep a trouble-shooter nearby to deal with any problems that may arise. For a broadcast quality production a high degree of training is necessary to produce top quality results and the specialist knowledge required means that journalists do not operate this type of equipment. However, the rise in popularity of smaller terminals such as the BGAN has meant that, with minimal training, they are journalist-operable.

Guy Pelham cites examples of the areas of the world where BGAN has come into its own providing coverage in Afghanistan, Darfur and the recent kidnap of British Embassy officials in Ethiopia. The ability to report in this way has "transformed news gathering over the last year". It is now possible with BGANs and the right streaming software to achieve good quality results and has prompted a move away from the videophone. Obviously, there is a time and place for this equipment and the BBC use outside broadcast vehicles frequently in cases where multiple cameras are required at state occasions, for example.

Spectrum issues

The increase in the amount of satellites in orbit has meant that global coverage is much easier to achieve. However, the huge demand for immediate news has its problems. Guy Pelham flags the Indonesian tsunami as a prime example of the problems that broadcasters can experience when reporting on major global events. "In some parts of the world there were broadcasters all trying to report on a major global event and the amount of satellite space available wasn't enough and it became a challenge to secure the satellite space that we needed. It was not impossible and we did report on it but this made it more difficult."

The International Telecommunications Union (ITU) has identified a major issue in the allocation of spectrum for newsgathering. These services share the same spectrum that is also used for emergency communications, for example. With so many competing broadcasters, supply cannot meet the demand for satellite space. This topic will be high on the agenda at the upcoming World Radiocommunications Conference (WRC 2007). Since spectrum was originally allocated, the increase in audiences has increased considerably thus resulting in a greater need for spectrum. In some cases planning can avoid congestion of the allocated spectrum but due to the nature of breaking news and natural events, nothing can be predicted. In situations like this, competing networks can create further problems. As if this were not problem enough, new technologies are

also competing for spectrum share such as Wi-Fi and HDTV.

The ITU has already begun work to alleviate the issues caused by increased spectrum usage. As a result, the ITU held a seminar in March 2006 for ITU-R Sector Members, broadcasters, regulatory agencies and manufacturers where the pressing issues were discussed. For the moment at least, effective planning seems to be the way forward.

What happens next?

So what are the predictions for the future? The BBC are currently looking towards VSAT technology to complement their range of news gathering techniques and are currently running trials. Guy Pelham remarks that a combination of kit with low weight and low power and with the compression that is available today can produce reasonable quality 'lives'. He is also mindful that new technology such as HDTV will require a quality drive.

However, technological developments in the future will see competing methods of newsgathering vying for attention. Emerging technologies such as Wi-Max, FTP over broadband and 3G networks are becoming increasingly popular. For example, 3G networks are becoming faster and have the ability to uplink pictures and audio and using fibre is exceptionally fast and considerably cheaper than its more expensive satellite counterpart. That said, Mr. Pelham is quick to point out that satellite is sometimes the only suitable form of news gathering "The unique selling point of satellite technology is that, used in the news gathering context, it goes anywhere. If you are covering a story in the middle of nowhere there is no infrastructure and satellite is the only way to do it. There's no Wi-Max, no fibre, no 3G. But with satellite you take the infrastructure with you and this is the unique selling point of satellite and why the BBC will be sticking with it for the foreseeable future."

Indeed, the scope for development is huge and the possibility of remotely controlled systems where journalism may be carried out without putting those who use the equipment at risk in war and disaster zones for example, is already being looked at.

The newsgathering industry has also begun to use IP, which gives broadcasters the ability to use editing equipment in the field and to transport the data back to the studio without changing formats. It also allows 2-way talkback so that the studio and the field can seamlessly communicate.

There is no 'one size fits all' when it comes to newsgathering and the key word appears to be 'flexibility'. If we look at today's news climate we can see how technology has had to move with the times. News can break from all continents at any time and the need for journalists to be on the spot ready to cover the news is very competitive. There are also a number of considerations that must be taken into account when selecting a method or a combination of methods of newsgathering. For example, budget restraints often determine the type of method used. However, there can be no doubt that SNG remains the most versatile newsgathering technique. Its ability to 'get anywhere' is its forte and the technological advancements that are made year on year will see satellite continuing to be easier to use, more and more cost effective and able to deliver news gathering of the very highest quality. ●

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