# THE IMPACT OF SATELLITE NEWS GATHERING TECHNOLOGY ON THE BROADCAST NEWS INDUSTRY AT THE LOCAL AND NETWORK LEVELS

By

Che L. Baysinger

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF ARTS

Department of Telecommunication

1988

ABSTRACT

THE IMPACT OF
SATELLITE NEWS GATHERING TECHNOLOGY
ON THE BROADCAST NEWS INDUSTRY
AT THE LOCAL AND NETWORK LEVELS

By

Che L. Baysinger

The use of satellite news gathering vehicles, regional satellite news gathering cooperatives, and regional and national satellite news services has created profound changes within the television news industry. Local stations have access to more regional, national, and international news and are potential competitors with the network newscast.

This thesis examines the use of SNG technology by local stations. It discusses how SNG has changed the way stations collect and cover news. It also examines the independent satellite news gathering networks such as Conus and CNN. Finally, it explores the way broadcast networks have responded to new local independence, and the possible extinction of their nightly newscasts.

A national survey of 15 news directors and other news personnel is also contained here. It reveals the motives and opinions of people who are actually involved with satellite news gathering. This random telephone survey was taken by the author of this thesis in July, 1988.

This thesis is dedicated to
S.E.W.
who has always given me
moral support and encouragement
when I needed it.

ACKNOWLEDGEMENTS

Special Thanks to Dr. Linda Kohl and Dr. Kent Creswell

TABLE OF CONTENTS

LIST OF TABLES

# INTRODUCTION

A fundamental structural change is taking place within the broadcast news industry. Television stations across the country are now capable of sending their own crews to cover news events great distances away. In addition, television stations are now able to subscribe to one or more satellite news services, adding diversification to their news programming and increasing the amount of information made available to their audience.

For the local stations, ownership of satellite news gathering equipment means a sharper competitive edge and a boost in image, especially for those stations which are the only station in their market to offer this exciting new service. In a business environment where an increasing percentage of a station's revenue comes from news programming, this means added financial security.

Subscription to one or more satellite news services, in addition to network satellite feeds, means that local stations have increased opportunity to monitor and select those stories having the most interest to and the most impact on their viewers.

It may prove true that not every television station in the future of broadcast news needs to have a Satellite Newsgathering Vehicle (studies have shown that SNVs are the most valuable in large competitive markets where one of the stations already has a SNV). However, subscription to a satellite news gathering service, like subscription to AP or UPI for newspapers, may be imperative for any station wanting to provide even the most basic of newscasts. Like Electronic News Gathering (ENG), Satellite News Gathering (SNG) may become the norm.

Use of SNG technology at the local level has also been a catalyst for change in respect to broadcast journalists. Television reporters and anchors in medium to large markets have always needed to know a little bit about everything. "Beat" reporters need to know a lot about several things. Local reporters, who may now travel hundreds of miles to get an increased variety of stories, must also have increased knowledge and sophistication, and the ability to investigate issues and events in relatively unknown environments. There's little opportunity to create a network of "ties and bonds" - knowing where to go and who to call for certain information. In contrast, the broadcast networks have had years to develop these connections.

The ability to go "live" from almost anywhere - rather than waiting for network reports from Washington DC or London, for example - has also added pressure to the reporter's role. When an important story breaks two states over, the Satellite News Vehicle (SNV) and its crew may be sent to handle it. If the station is a member of a satellite news cooperative, a reporter may fly into the area with plans to use another, nearby member station's equipment to cover the story. Regardless of the specifics at this point, that reporter is now placed in the position of having to get the story on the air fast, often without the benefit of perspective. Perspective and background information are essential elements of a good news story. Unlike newspapers, however, broadcast journalists have the luxury of frequent updates. After delivering the initial story, television reporters, and radio reporters as well, can develop an understanding of the issues that led up to the event. They can then go on to explain in subsequent newscasts how that affects the people directly involved and those in the community at large, including local viewers. Network newscasts are rigidly structured and rarely does ABC, NBC, or CBS offer programming that will disrupt their regular schedule. Local stations, however, can take their own news

updates, or updates offered from the satellite news services, and interrupt the schedule as they wish. They may also wait to carry their update during regular newscasts. The point is, the option is theirs.

The ability to go live is not new for the television camera crew, reporters, news directors and producers. ENG has made this an option for nearly fifteen years. SNG has placed this option on a world-wide scale.

Satellite news gathering has also resulted in some major changes for broadcast networks and their news operations. In response to independent news organizations, beginning with Conus, all three networks have improved their satellite offerings to affiliates. They have also offered to subsidize affiliate purchases of satellite news gathering vehicles. Yet, television network news is continually losing money, primarily due to increased use of SNG at the local level.[1]

American viewers seem to need network news less and less. In many cases, local stations compete directly with the network newscast, offering the same stories with the same or similar video. And, since they usually air in the time slot just before network news, a significant number of viewers seem to be switching channels just as network news comes on, satisfied by the news offering of their local stations.

There seems to be little question that the role of broadcast network news is changing. Some say network news will become extinct before the end of the century. Others believe it cannot be adequately replaced at the local level. News divisions at the network seem intent on fighting back. The question may ultimately be whether the network themselves, two of three controlled by conglomerates, are willing to maintain an increasingly money-losing operation. Can network news turn this around?

The use of SNVs, membership in news cooperatives and subscription to satellite news services has had a direct impact on the audience, who for the most part, are unaware of and have no real interest in how their news is collected.

Audiences are receiving more news, from more places, covered with more depth, from a variety of angles. This is possible precisely because major news events are now covered by more news organizations. Coverage is not left solely to the networks. This increased competition may benefit the American viewing public. Those viewers who choose to watch more than one source of broadcast news are capable of getting more than just "headlines."

This thesis will discuss changes resulting from the introdution of SNG at the local level. Satellite news gathering has broadened the reach of local stations to include regional, national, and international news. With the purchase, rental or lease of a SNV, stations themselves can cover distant stories with national and local interest. With the inclusion of one or more satellite news gathering services, stations generally have a variety of stories to carry within their newscasts. The development of SNG since the early to mid-1980's affects a participating station at the business, management and content levels. Use of SNG has impact on a station's economic structure, its decision-making process, and its story line.

This thesis will also discuss the impact of SNG on broadcast networks - how they will react and change in order to survive. The utilization of SNG technology has altered the network-affiliate relationship, with regard to news, and continues to do so. The traditional domain of the networks has been invaded by many local stations, who were once limited to area news. The network role of provider may soon become obsolete, and restructuring is inevitable.

Use of SNG technology has expanded the capability of ABC, CBS and NBC as well, and they may be able to build on their long-standing connections, experience and reputation to a level of expertise unreachable by others.

As a basis for understanding the structural impact of SNG, this thesis will begin with a discussion of the technology which allows such an impact to take place.

Chapter 2 addresses issues at the local level while Chapter 3 deals with network adaptations. The fourth chapter contains a survey of stations who operate SNVs and/or subscribe to one of the new satellite news services. A survey of several stations without SNG is also contained in Chapter 4. Survey results are in narrative form, including several tables. The final chapter contains a summary and conclusions of this paper's findings.

# CHAPTER I

## THE TECHNOLOGY SURROUNDING SATELLITE NEWS GATHERING

This chapter begins the discussion of SNG by describing satellite launching and operational considerations. Issues involving C-band and Ku-band technology are included, as well as a discussion on the technology of satellite news gathering vehicles.

### Launch and Operation

The ability to launch communication satellites, the basis of SNG technology, has been in serious question since 1986, when the Americans, the Soviets, and the Europeans all suffered setbacks in space technology.

March 11, 1988 marked the first launch of an American communication satellite in over two years, relieving some of the stress major U.S. satellite operators must have felt during that time. The launch was conducted by Arianespace and took place from Kourou, French Guiana.

The existence of satellite communications was made possible through the development of rocket launch capability, and until very recently satellite launching services could be obtained in very few places. The U.S. and the U.S.S.R. have long dominated the number and purpose of artificial satellites by controlling access to launch facilities. The Europeans developed the first alternative to existing facilities in the mid-1970s with Arianespace. Unfortunately, all three operations have been plagued with troubles and, during several months in 1986, all were grounded for accident reviews. However, the Soviets and the Europeans seem to have

overcome their problems and are once again launching on a somewhat regular basis. NASA expects a launch this summer. Several new entities have also entered the marketplace, and a variety of launch facilities are becoming available. Possible new commercial competitors outside the United States are China, Japan, India and others, including the Soviet Union which has recently opened facilities for international use. In August of 1986, the Reagan administration announced a new policy that requires all future private commercial satellites to be launched by expendable launch vehicles (ELVs), rockets that do not return to Earth.[2] The job of getting commercial satellites into outer space from the United States, including those used for SNG, no longer rests with NASA and the shuttle. Several private, commercial launch companies now operate within the U.S. including Martin Marietta, McDonnel-Douglas and General Dynamics.[3]

McDonnel-Douglas will be capable of launching 12 missions per year through 1991. Its first scheduled commercial flight is set for December, 1988, and launch costs are estimated at $40 million.[4]

Martin Marietta, whose vehicles will be capable of carrying much heavier payloads, expects to send 10 satellites into orbit within the next two to three years, each with a $100 million price tag.[5]

Discovery, NASA's shuttle booster, is scheduled to launch in late August of this year. Despite President Reagan's decree, loopholes in policy may mean that several prior launch contracts will be honored. The Shuttle may carry a few communication satellites, and it may be involved in commercial launching for several more years.[6] However, a shortage of rocket fuel manufactured by U.S. companies presently exists. This is due to the May, 1988 explosion in Nevada of one of only two such companies in existence.

A large backlog of satellite owners waiting to launch their payloads presently exists. As GTE Spacenet president, C.J. Waylan said, the March launch of Spacenet III-R was

important for the satellite industry to regain "reliable and routine" access to space.[7] Reliable and routine access to outer space is a must if satellite news gathering is to grow. SNG depends on reliable and routine access to information provided via those satellites. Satellites and their transponders must, therefore, be maintainable and/or replaceable.

Long distance communication using modulated electromagnetic fields was first introduced in the 1920s with the development of radio broadcast. As technology progressed, microwave became an integral part of telecommunications. These systems were limited by a series of line-of-site relays however, and a more efficient method of transmission was needed.

The potential of orbiting mechanisms in space as a means of telecommunication was first conceived of by Arthur C. Clarke. In 1945, Clarke wrote an article in Wireless World describing the use of satellites for worldwide telephony and television. He also explained the concept of geostationary orbit (GSO), saying earth satellites could appear to hover above any point on the equator. Put into the proper orbit, at the right height, a satellite would circle the globe at a speed exactly matching the rate at which the earth turned on its axis.

Clarke's conceptualization of space utilization was realized when the U.S.S.R. launched Sputnik I into outer space in October of 1957.[8] Ten months after this, Score, the first artificial satellite used for voice communication, was launched and was used to broadcast President Eisenhower's 1958 Christmas message.[9]

The year 1960 brought not only a new decade and a new U.S. president, but a continued interest in outer space exploration and utilization. The need for active satellites, those with power amplification, was being recognized. However, satellite size, and therefore capability, was strictly limited by the capacity of the launch vehicle in these early years. Echo I was sent into medium altitude

orbit in 1960. This was merely a passive reflector, relaying carrier waveforms for long-range, over-the-horizon communications.

Echo, a large metallic balloon, was a simple but reliable approach to satellite relay, given the limitations of its launch vehicle. Unfortunately, huge transmitters were needed on the ground. These earth stations were very expensive and restricted the ability of many potential users to utilize this technology.

Telstar I, the first active repeater, built by American Telephone and Telegraph (AT&T) and launched by NASA, was sent into orbit in July of 1962. It was the first private space communications venture and the first successful use of broadband microwave repeaters for commercial telecommunications.[10] This low orbit, non-GSO satellite had limited capacity and required expensive earth stations with large antennas to track it.

NASA also launched Relay I that year. Relay was built by the Radio Corporation of America (RCA) and was used for experimental transmissions of voice, video and data. The launching of Score, Telstar, and Relay proved that active satellites could be used for transmission of long-range telecommunications. Now the concept of GSO was to be tested.

Early communications satellites were placed into medium-altitude elliptical orbits. They circled Earth in two to three hours at a height of 200-300 miles and were visible over the horizon for less than a half hour at a time. They had the advantages of low launch costs, larger payloads and relatively short radio propagation times. However, enormous tracking stations on earth were required and satellites had to be transferred from station to station.

These problems were alleviated with the use of GSO. Satellites in GSO are placed into a circular orbit over the equator at a height of 22,300 miles above the Earth. Three satellites in the proper locations of the GSO can provide continuous service covering the entire planet.

Early Bird, later renamed Intelsat I, operated by Hughes Aircraft Company and launched by NASA in 1965, was soon followed by Intelsat II. Intelsat, an international consortium, was created in 1964 to provide a single satellite system for international communications. Among other things, Intelsat is used to provide SNG between the U.S. and countries overseas, especially those of the Third World.

Also in 1964, the U.S.S.R. launched its first communications satellite in an elliptical, high altitude orbit. The Molnyia satellite, launched in April of 1965, provided television and voice communication to the Soviet Union. Some Soviet spacecraft continue to operate in a non-GSO for maximum efficiency.[11]

The first true commercial satellite communication system to operate "under the forces of the free marketplace and to be financed with risk capital"[12] went into operation in 1974. Due to the 1972 FCC "open skies" policy, which allowed any business or firm with the financial and technical ability the right to provide NASA with satellites, three domestic carriers (domsats) were allowed to begin operation during this year. These were American Satellite Corporation, the first to lease satellite transponders; Americom of RCA; and Western Union. Western Union launched Westar I in 1974, making it the first domsat in U.S. history.[13]

Also during 1974, RCA Americom began a series of Satcom launches, while AT&T and GTE shared Comstar I and II. In fact, several satellite operators began business between 1974 - 1984 and the satellites put into orbit during that period are due soon to expire, leading to a second generation of satellites with advanced technology.

Today, the major U.S. satellite operators include RCA Americom (Satcom); Hughes Communications (Galaxy); GTE Spacenet (Spacenet); AT&T (Comstar); Western Union (Westar); Contel-American Satellite Corporation, and Comsat, along with National Exchange Incorporated, and Alascom Incorporated.

RCA and Hughes have the majority of broadcast and cable

satellite business with most of the broadcast networks, local stations and cable headends pointed at them. The very powerful Hughes Galaxy I, a C-band bird, is most popular at present with RCA's Satcom III-R holding a close second, at least among programmers.[15] Telstar 301, Westar IV and Satcom IV, where other broadcast signals are relayed, are less powerful satellites. The strength of the satellite itself is important and, in large part, determines the signal quality and the necessary dish size at the receiving end.[16]

Although Hughes and RCA presently dominate the broadcast satellite business, they are also involved in the non-broadcast market. And, Western Union, GTE Spacenet and Comsat have concentrated more voice and data up to this point. However, many satellite operators and vendors have been strongly advocating both broadcasting and business applications, especially in the Ku-band. In fact, GTE Spacenet plans to provide a "customized satellite news gathering service" for ABC. GTE Spacenet intends to launch two more Ku-band G-Star satellites by 1990, putting its total at seven orbiting birds. ABC will lease transponders on three of these including one on each G-Star II and one on the hybrid C-/Ku-band Spacenet I. All of GTE Spacenet satellites have been launched by Arianespace. Spacenet III, launched in March, is also a C-/Ku-band hybrid and has the capacity for cross-strapped downlinking, meaning it can receive in one band and transmit in another, adding a great deal of flexibility.[17]

## The C-band/Ku-band Controversy

Virtually all major satellite providers with Ku-band capacity are pushing Ku to network affiliates and independents for satellite news gathering, and to syndicators for delivery of programming. NBC chose Ku-band early on, and RCA, NBC's parent company, took the lead among satellite owners by giving Ku-band antennas to over 600 of the nations

approximately 900 full power broadcast television stations.[18] In return, those stations promised to aim them at RCA's bird.

HBO now wants other major cable programmers to join it in stepping up from C-band to medium powered Ku-band satellites that can beam signals to one meter dishes.[19] It would then be possible to send their signals directly to the subscribers home. Conus has been using Ku-band for its satellite news gathering service and cooperatives since its inception in 1984. Many predict that as C-band satellites wear out, Ku-band satellites will replace them, possibly replacing them altogether. To understand the differences between C- and Ku-band satellites, an understanding of overall space technology is appropriate.

A communication satellite is a human-made platform in outer space which contains a number of receiver-transmitters known as transponders. The satellite acts as a repeater station, relaying micro wave signals between antennas on earth. One of its major advantages is that it is distance insensitive, meaning additional receivers add nothing to costs. Unlike terrestrial microwave relays, which must add individual towers to increase its coverage area, satellite relays reach any dish within their footprints. This also means that signal quality is maintained, since it is usually processed only once between sender and receiver.

Satellite relays also require a minimum of power to operate effectively, resulting in much lower overall costs then high powered terrestrial relays. For example, it takes about 75 microwave ground relays to get a signal from New York City to Los Angeles, while it takes only one satellite relay for the same distance.[20] Satellite relays are faster, clearer and more cost-efficient in the long-run.

The main advantage for SNG, however, is that it can be mobile. The satellite is relatively stationary, but senders can move about at will, essential considerations for live news coverage and other live-on-tape reports. This type of mobile uplink is used by SNG stations which have SNVs -

trucks or vans that contain small Ku-band dishes and other necessary equipment. Here, television cameras turn the images they see into electronic signals. Equipment on the truck modulates the signal into a microwave carrier frequency and sends it up to the appropriate satellite, via a very directional beam. The signal is then captured and relayed back to the ground station, boosted, demodulated and converted once again into the TV signal. It is then transmitted to the broadcast station for airing.

Another type of uplink in use is known as a fixed earth station because it does not move. Fixed uplinks can serve either one organization, like a single broadcast station, or a number of different originating agencies. Signals are sent to the uplink, modulated onto the carrier frequency and beamed to the proper satellite. Fixed station transmitting antennas, also known as dishes, are much larger than mobile uplinks, usually between 10-30 feet. Fixed satellite uplinks normally operate in C-band.

The design of a satellite itself is a matter of compromise. The satellite must carry a large amount of basic operational equipment in order to fly. It also carries a number of transponders and antennas which enables it to act as a relay. The more transponders, the more communication capability. However, this added capability means added weight, resulting in greater launch costs, a shorter period of usability because of gravity and drag, and less economic viability. In order to strike a reasonable balance, many satellites, carry 24 transponders and last for 9-10 years. New satellites will be capable of carrying at least 50 transponders. "A typical ~~transponder~~ satellite carrying 24 transponders can relay 24 TV signals, more than 14,000 radio programs, nearly 29,000 telephone conversations, innumerable data services, or combinations, thereof."[21] Most recently launched satellites use polarized signals so that each transponder can carry two channels, for a total of 48 channels per satellite.[22]

A single transponder consists of a microwave receiver, a converter, and a transmitter, with each transponder operating on a different pair of channels. Because of this, each satellite needs two sets of frequencies, one for uplinking and one for downlinking. Each must be separated adequately to avoid interference.[23] The uplinking frequency of all satellites is higher than the downlinking frequency, primarily so that earth stations can operate at the lower, less expensive frequency.[24]

Earth station dishes must be aimed very specifically at their intended target, and their paths must be unobstructed by buildings, hills or similar obstacles. The satellites microwave carrier frequency and the strength of its signal determine the required dish size. High frequencies and strong signals can operate with smaller dishes.[25] However, the quality of a received signal also depends on the size of the dish. Smaller C-band dishes are less susceptible to interference, but they also receive less of the actual signal from the satellite. Few places exist within the U.S. where a dish smaller than 3.8 meters for C-band reception will be adequate. On the East Coast, 5-7 meter dishes are the absolute minimum[26] because they are located on the outer footprint edge of most satellites aimed at the United States. Local broadcast stations receiving satellite news feeds from ABC, CBS and other C-band providers must keep these requirements in mind. However, higher frequencies and stronger signals also affect dish size and this is where the advantage of Ku-band comes in.

Use of satellite relays for communication purposes began in C-band, which is located in the 4-6 GHz region of the electromagnetic spectrum. C-band has proven itself to be quite reliable, and it has a large base of existing receivers in place. However, it is also popular with terrestrial microwave users, making it susceptible to interference and often difficult to use.

C-band satellites are generally used as common carriers,

meaning their transponders are leased out by vendors for a variety of purposes. These birds operate within a range of 5-10 watts. This low operational power and relatively low microwave frequency requires that receiving dishes be large, and therefore, costly.[27] Another common complaint is that they are ugly, and occasionally dish owners have difficulty finding a place to put them.

Because C-band wavelengths are relatively long, they are not subject to rain fade as higher radiowaves are. These facts, in addition to an increasingly attractive cost structure due to the popularity of Ku-band satellites, will probably keep C-band use around for many years to come.[28]

However, the future of SNG lies in the Ku-band. It has already altered local station ability to gather news through its use of satellite news gathering vehicles and its impact has been substantial.

The primary advantage of Ku-band satellites rests in their higher frequency and power. The Ku-band lies in the 12-14 GHz portion of the spectrum and operates within a power range of 40-50 watts. Since power and frequency determine the required size of the receiving dish, it can be as small as 1.8 meters. This allows a broadcast station to use a mobile, Ku-band uplink, relaying live coverage to its home base from almost anywhere. In addition, satellites are the only users of this portion of the spectrum, resulting in a complete lack of terrestrial interference. It also eliminates the need for a costly frequency search. C-band users pay as much as $1000 for such a search due to heavy competition for those frequencies.[29]

The primary disadvantage to Ku-band use results from the extreme shortness of its wave. As frequency increases, wavelength decreases and there is enough difference between the two bands to cause Ku waves to be blocked and absorbed by small objects such as rain drops in a heavy storm. As early as 1985, however, a survey of broadcast television news directors said 3/4 of them believed this rain attenuation was

"manageable."[30] HBO released a 22-page report two years later which says it is convinced "rain fade is no longer the problem it once was" and "rain no longer degrades service for any significant time, even in the heaviest rains." These statement were made in the belief that the second generation of Ku-band satellites, which are much more powerful, have adequately reduced the signal margin and the problem.[31]

Use of these higher powered satellites can benefit a local news operation, not only by its purchase or rental of a SNV. They may also utilize a compact and portable Ku equipment package known as a "flyaway" which can be stored as luggage on any passenger plane. In addition, many of the relatively new independent satellite news networks deliver their news feed via the Ku-band.

Presently, there are 18 satellites awaiting construction permits at the FCC. Fourteen of these would be switchable hybrids,[32] with cross-strapped capability for uplinking and downlinking between bands. Switchable transponders allow a variety of services and can accommodate an increased number of users, making them a popular form of technology. It is especially advantageous for a broadcast station to receive programming (typically on C-band) and satellite news feeds (often on Ku-band) all on a small number of relatively inexpensive Ku receivers.

Orbital parking positions for satellites in the GSO are assigned by the International Telecommunications Union. They are identified by degrees of longitude, east and west of the prime meridian at Grennwich, England. A scarcity of orbital slots exists, similar to the scarcity of usable space in the electromagnetic spectrum. At times this has caused a rather heated international debate. The U.S. has been assigned a total of 113 parking places for its domestic satellites (domsats). Thirty-five of these are for C-band birds; 70 for Ku-band and the remaining eight are designated for even higher powered Direct Broadcast Satellites (DBS).[33] Each degree within the 360° of the GSO is equal to 470 miles. The

number of degrees between satellites needed to avoid interference depends on satellite power, antenna direction, and the sensitivity of the receiving station on the ground. Initially, 4° separation was required between U.S. domsats. With subsequent technical advances, this has been decreased to 2°.

Meanwhile, the FCC has made a tentative decision which would allocate a special segment of the orbital arc to high-powered, fixed Ku-band satellites. According to the 20 satellites operators and their customers who filed objections to this proposal last March, it would cost millions of dollars to redirect antennas and to relocate birds. The plan would reduce Ku orbital spacing from 2° to 1.5°. Its opponents claim 2° is necessary in order for customers to benefit from Ku's smaller, less expensive ground equipment.[34]

Getting a communication satellite into orbit involves several different aspects and, usually, several different companies. First, the satellite must be built and its construction is often commissioned by its operator, such as RCA or GTE Spacenet. Then the bird must be launched by NASA, Arianespace or one of the newcomers. The operators, who control the communication function, may then either lease out use of the transponders or program the transponders themselves. Because of economic and technical considerations, control of the differing aspects may be separate, but can and do overlap. For instance, in 1986, HBO and RCA agreed to joint ownership of RCA Americom's K-3 satellite. This would put HBO in the position of being a "landlord" instead of a "tenant". Until K-3 is launched, HBO will lease transponders on RCA's K-1 bird. It also owns individual transponders on Hughes' Galaxy 1 strictly for its own use.[35]

Not all time leased by users or programmers is on a permanent basis. Quite often, it is done on an occasional basis. For example, during the December, 1987 summit between Gorbachev and Reagan, GTE Spacenet provided additional, temporary service for ABC, CBS, CNN, Gannett, and other news

services.[36]

Since the mid-1980s, there has been an overabundance of available C-band transponder time, except on the two most powerful birds (Galaxy 1 and Satcom III-R). This means leasing costs are down as well. Prices have dropped within the last several years from an average of $200-300,000 per month to $50-60,000. Prices for occasional use have dropped even more drastically, down to around $300 per hour. In fact, it has become a "buyer's market" for occasional time.[37]

Launching of new Ku-band and hybrid satellites, including three more from Arianespace on June 15, 1988, may add to this "glut" of transponder time since more and more satellite vendors and their clients are switching to Ku-band. Purchasing time on Ku-band transponders is much cheaper than C-band and can be obtained in much smaller increments, making it more cost effective. Many local news departments receive transponder time through membership in an independent news gathering service such as Conus, the Florida News Network (FNN) and CNN. Time can also be purchased directly from companies that buy time at wholesale prices and resell it at retail prices. A capacity problem may arise, however, if most stations want transponder access at the same time, during the evening news, for example. This will have to be worked out between the stations, the networks, and the satellite operators. Companies that offer transponder time leasing services for Ku-band SNG, in addition to GTE Spacenet and RCA Americom, include Comsat General, AT&T, Southern Star Communications and the Central Florida Teleport.[38]

## SNG Vehicles - Direct Use of the Technology

The reason local stations may need transponder time is often because they are utilizing satellite news gathering vehicles. These SNVs are sent to the news scene where crews shoot and report the story, either live or live-on-tape. The story may also be beamed to other members of their news

cooperative.

Use of SNVs has increased substantially since they were introduced by Hubbard Broadcasting in 1984. As of 1987, 92 U.S. broadcasters were using mobile Ku-band SNVs.[39] At the December, 1984 Radio-Television News Directors Association (RTNDA) convention, only Conus Communications demonstrated its SNVs, and only a few stations were using them. By September, 1985, at least 12 companies were involved in offering the technology.

Today, there are approximately 130 SNVs on the road. Truck manufacturers include Hubcom (Hubbard's equipment manufacturing division), Comsat General, the Centro Corporation, Harris, BAF Communications, and Dalsat. Dalsat, of Texas, builds 10-12 SNVs each year. 40 percent of these are sold either directly to TV stations or to companies that rent SNVs to TV stations. The remaining 60% are sold to business corporations and telephone companies. The average cost of a well-equipped Ku-band Dalsat truck is just under $427,000. This includes a 12-foot antenna, electrical equipment, radios, telephones, computers, test equipment, TV monitors, and the truck.[40]

For an additional $220,000, Dalsat can include two video encryption devices which produce a scrambled signal less vulnerable to evesdropping.[41] However, the FCC is also considering the requirement of a protective device known as an automatic transmitter identification system (ATIS). ATIS would act as a broadcast "signature" for satellite uplinks. It would be inserted into the video of dispersed signals, and modulated onto the radiated signal of each transmitter.[42] Although signals would remain subject to unauthorized use, any question of transmission ownership might be proven in this way. For instance, if a non-member picked up video off a satellite, intended for use only by Conus members, Conus might then prove this infringement by demanding to see the ATIS.

Although the price of a top-line Dalsat truck is high,

some are cheaper. The initial cost of a modestly equipped vehicle may be as low as $300,000 with a yearly operating budget of $100,00.[43] CNN has been negotiating with truck manufacturers for SNVs costing between $150,000-200,000.[44]

SNV owners can bring in additional income by renting or leasing their trucks to other stations, earning around $2,000 per day. A number of rental companies also provide SNVs. Both C- and Ku-band trucks are being rented, but Ku-band trucks are smaller, less expensive and more mobile. They can also be set up and ready to go in under an hour, while C-band vehicles must usually wait for frequency clearance. One company rents out fully-equipped C-band trucks for $4500 per day, while charging only $3500 for Ku-band trucks.The company vice president said that in two years, they had lost a Ku-band signal only once due to rain fade, and that was during a hurricane with 85 mile-an-hour winds.[45]

Use of SNG vehicles, compared with electronic news gathering vehicles, may be seen as a higher step on the same ladder. Using SNG is more expensive because transponder time must be purchased. Each system offers live coverage in many of the same ways. One major difference is that SNG lets stations go farther. SNG is just as portable and can be as easily and quickly accomplished by 2-4 people. However, SNG is sometimes necessary even for coverage within a station's own immediate area. SNG can go places where terrestrial relays are blocked by tall city buildings or hills, such as those in San Francisco or Denver.

Usually one will find on-board editing facilities for SNG. The reporter can put together a story package on-sight, including stand-ups and wrap-arounds. This allows viewers to see the reporter live at the scene, with the inclusion of previously shot video and interviews. This is also possible with ENG. However, often the video must be sent back to the studio for later editing by the reporter, or editing by someone else.

According to the March, 1987 Satellite News Gathering

survey done by the National Association of Broadcasters (NAB), 98.6% of SNVs currently have video tape editing equipment on-board. 86% also have cellular telephones, and 70% have terrestrial micro wave facilities.[46] Many stations choose to combine SNG and ENG into one truck in order to save money and time.

SNG technology is smaller, more reliable and less expensive than it was a few years ago. A second generation of equipment is being designed specifically for mobile use. Antennas are compactable and can be folded for traveling. SNV equipment, compared to fixed SNG equipment, is built tougher, with "features that are needed on a truck, not on the ground." Another big difference is in the electronics. Until recently, power amplifiers were large, expensive and heavy. Advancements in technology have resulted in smaller amplifiers, ultimately reducing the size of the truck.[47]

SNVs come with a variety of modifications and price tags, and stations intending to purchase a truck or van need to keep their individual needs in mind. Like anything else, owners should get what they pay for, and less expensive trucks may not have the capability or reliability of the more expensive SNVs. However, prices are going down, and consistency between manufactures appears to be going up, enabling stations to mix and match SNV equipment.

This chapter has provided a historical overview of satellite technology, along with some operational considerations which exist today. It has also described some technical and operational aspects of satellite newsgathering vehicles.

## REFERENCES

### Chapter I


1. "Gloomy picture painted for TV network news," Broadcasting, 3-21-88, p. 51.

2. Foley, Teresa, "Reagan bars shuttle from competing for new satellite launch contracts," Aviation Week and Space Technology, 8-25-86, p. 22.

3. "Birds fly again after two-year hiatus," Broadcasting, 3-21-88, p. 65.

4. "McDonnell-Douglas Astronautics receives deposit for communication satellite launches," Aviation Week and Space Technology, 4-13-87, p. 29.

5. "Marietta forges into new space field," Wall Street Journal, 3-24-87, p. 6.

6. Foley, Teresa, "NASA planning use of expendables to launch science spacecraft", Aviation Week and Space Technology, 6-23-86, p. 18.

7. "Birds fly again"

8. Jansky, Donald, and Jeruchim, Michel, Communication Satellites in the Geostationary Orbit, Artech House, Inc., 1983, p. 13.

9. Pritchard, Wilbur and Sciulli, Joseph, Satellites Communication Systems Engineering, Printice-Hall, Inc., 1986, p. 1.

10. Ibid.

11. Ibid.

12. Fthenkis, Emanuel, Manuel of Satellite Communications, McGraw-Hill Book Co., 1984, p. 1.

13. Head, Sydney and Sterling, Christopher, Broadcasting in America, Houghton Miffin Co., 1987, p. 107.

14. "Birds fly again", p. 65.

15. Livingston, Victor, "Satellite industry rethinks marketing to broadcast, cable," Television/Radio Age, 3-3-86, p. 56.

16. Gordon, Ed., "Weeding out the toadstools," Television/Broadcast Communications, 3-85, p. 48.

17. Zavistovich, Alex, "Spacenet III in orbit," TV Technology, 5-88, p. 12.

18. Livingston, Victor, p. 56.

19. "Where things stand," Broadcasting, 5-23-88, p. 14.

20. Whitehouse, George, Understanding the new technologies of mass media, Prentice-Hall, Inc., 1986, p. 148.

21. Ibid., p. 152.

22. Head, p. 181.

23. Ibid.

24. Whitehouse, p. 156.

25. Ibid., p. 153.

26. Gordon, p. 48.

27. Whitehouse, p. 155.

28. Livingston, p. 94.

29. "Satellites giving networks greater news freedom," Broadcasting, 7-14-86, p. 42.

30. "Satellite News Gathering gaining new foothold and then some," Broadcasting, 7-8-85, p. 68.

31. "Satellite Footprints," Broadcasting, 1-19-87, p. 226.

32. "Birds fly again," p. 66.

33. Whitehouse, p. 156.

34. "Satellite Footprints," Broadcasting, 3-21-88, p. 66.

35. Livingston, p. 58.

36. Advertisement, Broadcasting, 5-16-88, p. 6.

37. Livingston, p. 96.

38. "Networks all on SNG bandwagon," Broadcasting, 7-14-86, p. 51.

39. "SNVs to play major role in 1988 campaign," Broadcasting, 7-20-87, p. 73.

40. Bradsher, Keith, "Broadcast wheels," Los Angeles Times, 2-22-88, p. 5, col. 1, sec. IV.

41. Ibid.

42. "Regulatory News," TV Technology, 12-87, p. 2.

43. Lacy, Atwater, Quin, and Powers, "Cost and Competition in the adoption of satellite news gathering technology," Journal of Media Economics, 1988.

44. "NBC latest to offer subsidized Ku-band trucks," Broadcasting, 1-27-86, p. 67.

45. Bradsher, p. 5.

46. DeSonne, Marcia, "Satellite News Gathering Survey", National Association of Broadcasters, 3-87, p. 11.

47. Standish, Kim, "Satellite News Gathering: The next round," RTNDA Communicator, 9-86, p. 39.

# CHAPTER II

## USE AND IMPACT OF SNG AT THE LOCAL LEVEL

Chapter two discusses the use of satellite news gathering vehicles, along with issues and problems associated with that use. It also discusses independent satellite news gathering services, including specific mention of several such services. Increased descriptive detail is provided for Conus Communications and CNN because of their greater impact on SNG.

### Local Level Considerations

Use of satellite news gathering technology is changing the content of the local TV news broadcast by allowing stations more immediate access to news events, and a wider variety of information from across the state and around the world. Stations which own satellite news gathering vehicles can drive to news events within reasonable distances and time limitations. Stations belonging to news cooperatives can share equipment, stories, reporters and camera crews. Stations receiving satellite news feeds from the broadcast networks and independent news services have a large number of regional, national and international stories from which to choose. Often, major stories or stories of special interest are covered by more than one news services. Stations can select the types of coverage that best suits its audience. Each station may also decide the amount of time it will devote to a particular topic. As a result, newscasts are becoming much more diversified. They are also becoming much more profitable.

As Yoakam and Cremer point out, SNG has changed the definition of local news. The authors also quote a former president of the Radio-Television News Directors Association (RTNDA) who says the strongest thing a local station has is its news identity. He adds that the station's ability to cover events outside its local area enhances that identity.[1] Station managers have known this for years and have continually searched for ways to build on their station's individuality, especially through news programming.

The primary benefit of SNG is that it increases a station's reach far beyond its immediate area. Stations using this technology now have a broadly increased news inventory, and they are looking far beyond their ADIs to an unlimited range of coverage. As one news director put it, "It's not just a new technology, but a vast new source for expanded coverage."[2]

By using satellite coverage of distant and local events, those news departments are creating an appetite for this coverage. Soon, every station with news programming will need some level of SNG, whether it is a mobile van or simply a fixed dish. This is much the same situation which existed with the advent of ENG in the mid-1970s. Just as portable video equipment and microwave relay vans became routine, so will SNG. It is a part of the "evolution of the news gathering business."[3]

The term "satellite news gathering" actually refers to several uses of C- and Ku-band technology. SNVs are used to take a station's news team to the news event itself. Satellite news gathering services deliver video and audio for news stories from a wide range of sources, and news cooperatives allow stations to share stories and talent. The various applications of SNG can be used separately or in combination, and all have impact on local and network news operations.

However, satellite networks are used much more widely than SNVs. A recent study by Lacy, Atwater, and Powers

suggests that these two applications are being used for different purposes. According to the survey, the networks are most often used for news coming from regional, national and international sources, while SNVs are used most for coverage within a station's ADI and state.[4]

To understand the different applications of SNG technology, for purposes of this paper, they will be discussed in two categories. First, satellite news gathering vehicles and second, independent news gathering services.

## Satellite News Gathering Vehicles

One of the primary reasons a station chooses to purchase or lease a SNV today is because of the station's competitive nature. Most stations with the propensity to utilize SNVs are very interested in getting their own news, doing their own coverage, and being "first." They want to be first with the story and first to obtain the technology to do so. This aggressive behavior by a news department demonstrates its willingness to go farther for those stories their viewers need and want to see.

It also creates a station image in the minds of it viewers . . . an image of the station's news reporter getting the audience the news it needs to have. For instance, SNV crews around the Gulf Coast and other hurricane areas are often seen standing on the shore, just before the storm hits, telling the community just how bad the situation really is. This commitment breeds loyal viewers.

One distinguishing mark of a sophisticated news operation today is a TV control room full of monitors, displaying live and taped material from its SNG and ENG crews. This is the image those innovative stations with state-of-the-art technology want to create and maintain. When a station gets its own news material, it owns that material. It chooses what stories will be covered and in what manner. Control lies at the local level, not at the regional or national level where

many decision makers think alike. The number of gatekeepers in this country is being increased, and this should result in a broader range of ideas and information made available to the American public.

SNG goes a step beyond ENG and increases credibility in the audience's mind. However, stations do not see a direct return on SNV investments. It is more a matter of "maintaining a news presence and a ratings presence that may not exist if you don't stay up with the technology."[5] This may be more true of satellite news gathering services at this point, although it may soon apply equally to SNVs, at least in some markets.

This is not to say that buying a truck or other SNG equipment will boost station ratings. In fact, it is impractical to tie anything in TV news directly to ratings. Instead, a station and its news team must relate all aspects of their news programming together to develop an image. That is what affects ratings.[6] Ratings then determine the amount of dollars spent by advertisers on a particular program. In essence, this means SNG helps pay for itself.

Rivalry appears to be a primary factor in the use of SNVs, especially among those stations whose direct competitors have SNV capability, i.e., stations in the same market. In one study, news directors believed SNV capability gave them a competitive edge only when competing stations were without the same capability.[7] However, another study found that the use of SNVs attracted viewers. If one station has the capability, so must the others in its market, if they wish to maintain a competitive position.[8]

This same study indicated that a station's financial position is also a primary factor in purchasing a satellite truck. Only those stations in an "intensely competitive market" are likely to be forced into using a SNV because of its competition. All stations responding to the study had yearly news budgets of more than $250,000, and nearly 80% had budgets of more than $1 million.[9] Station economics

continues to be a prohibitive purchasing factor for many stations.

Another important ingredient when considering the purchase of a SNV is individual station news philosophy. For those stations wanting to go farther, stay longer and cover the story more thoroughly, SNG is the answer. But for stations whose main function lies in covering local news, ENG relay remains the technology of choice. The old cliche applies: "Why fix something that isn't broken?" For these stations, the question of whether one or two big stories calls for a SNV is answered with a simple "no."

However, not every station requires a SNV to meet its market's needs. In some cases, a fixed dish is all that is needed for sending and receiving stories. In other cases, satellite systems are not necessary at all. Using a helicopter for microwave relay can produce good coverage for up to 100 miles.[10] Some stations have been using microwave relay to cover their regions for several years. For example, the New England News Exchange links approximately eight television stations and several radio stations. Each gets live regional reports each night from three area bureaus.[11] ENG vans themselves can also be used for terrestrial microwave relay.[12] The difference is the amount of effort involved and possible signal degradation. With SNG, a station goes out, gets the story and sends it back. With multiple relays, it takes several SNG vans and several technicians. Administrative headaches also increase.

According to the 1987 National Association of Broadcasters survey on SNG, "sophisticated technology and basic station economics" are the primary reasons for more station participation in satellite news gathering. The biggest reason for truck purchase to date is the ability it gives the station to expand its coverage area. The second most important reason for truck purchase is the ability it gives the station to go live. Competitiveness comes next; technical state-of-the-art followes. The fifth reason is

ability to provide news feeds to others. Also tied for fifth are business reasons, i.e., cost savings, promotional value and equipment replacement.[13]

Geography is a factor in some areas. Because of the mountainous terrain of Colorado, the only way to cover stories quickly in some areas is to use satellite coverage. In Raleigh-Durham, North Carolina, 65% of one station's viewers are outside the metropolitan area. Here, SNVs give stations "portability at affordable costs" in covering scattered audiences. In Salt Lake City, Utah, the ADI covers seven states. There are few fixed uplinks in this wide area and microwave relay is out of the question. The only way to get live coverage is with a SNV.[14]

Although the majority of SNV users are now in the top 50 markets, some optimistic thinkers say their use will filter down to smaller markets, primarily because hardware costs are decreasing. At least one manufacturer believes SNVs will become as indispensable as ENG vans are today. Another manufacturer calls SNVs a "revolution pushed by news" and says "it's not just a question of having a competitive edge, it's more a question of total flexibility."[15]

Independence is another advantage of owning or leasing a SNV. Although the previously mentioned study by Lacy, et.al., suggests that stations use satellite networks to gather national and international news, usually keeping their SNVs within the home state, the option to broadcast from distant places now belongs to stations using SNG. Stations are unable to take their trucks extremely long distances to cover breaking stories because of time constraints. Stations want immediacy, so they use flyaways or the SNV facilities of a nearby member. In return, they are immediately on the scene, providing SNV facilities for reporters and audio/video feeds, should a news event happen in their area.

SNVs may, however, travel to distant news events if the event is anticipated or on-going. Local TV stations are no longer limited by technology to covering local news. Once

they purchase a truck, they can take it on the road covering areas outside their city which would be impossible with microwave. Once at the news event, they can stay on-site, covering the news as it happens. Because of on-board editing, it is not necessary to return to the station for packaging. The story reaches viewers faster and the reporter can remain on-site preparing updates.

There are operational problems associated with the use of a SNG truck or van, however. When operating a SNV, stations must consider ordinary trucking rules such as training, licensing and driver work load. They must consider truck taxes across state lines and possible delays at the weigh stations.

During major events, such as political conventions, parking may be a problem, as well as access to phone lines and transponder time. This new ability for many stations to originate from news events could create a logistic nightmare.

Satellite news gathering vehicles can be used to report both hard news and soft news. One station uses its mobile uplink to cover both spot news and features. Its spot news has included an industry fire, a tornado and a nuclear accident. The news director says the single biggest expense in operating the truck has been "satellite time" which costs him about $4,000 per month.[16] A station in Edmond, Oklahoma used its satellite news gathering van to cover a mass murder committed by a ex-postal worker, also feeding live reports to 19 other stations around the country.[17] A station in New York used its SNV to cover the arrival of a young sailor, home from the Persian Gulf.

According to the NAB report on satellite news gathering, the types of news stories covered by local SNV owners ranges from breaking news stories to entertainment.[18] Ninety-seven percent of news directors responding to the survey indicated they used their truck most often for non-emergency, breaking news stories. Emergencies/disasters received second mention with 94 percent, and emergency weather conditions, 91.5

percent. Not far behind was special events coverage with 86 percent. A rather significant decrease in use of SNVs came after this. Sixty-eight percent of those responding said they sent their trucks to cover sporting events. Local public affairs took another sharp drop, down to 45 percent, as did the use of SNVs for coverage of documentaries. Entertainment programming came in with 18 percent.

In summary, this survey says that satellite news gathering trucks and vans are used most often (over 90 percent of the time) for hard news stories of immediate consequence. SNVs, because of their very nature, are used most often for their ability to quickly furnish live and live-on-tape video to their home stations.

## Issues and Problems Related to SNV Use

Live coverage of news events is often an impractical matter. Most breaking stories do not occur at times when they can be broadcast live. Broadcast networks and local programmers are very sensitive about program preemption and discourage interruption for anything short of immediate disaster. In fact, during the U.S. bombing of Libya in 1986, CBS ran a brief news bulletin and immediately returned to "Kate and Allie". Full coverage was made available by CNN.[19] However, sometimes live coverage does work out. For example, in the fall of 1987, NBC discovered that 18-month-old Jessica McClure, who had been trapped in a Texas well for several days, might be saved during the newscast. Preparations for a live exchange were made so that Tom Brokaw and a police official could talk via a mobile remote unit connected by satellite.[20]

Live coverage with SNG, like that of ENG, presents some unique problems. Often, the intrusive presence of television equipment has a direct impact on the event itself. People involved in the story may respond differently knowing they are "on the air". Reporters themselves may intrude on the

privacy of the participants, especially those who are dealing with traumatic consequences. Occasionally going live requires filling empty spaces of time between action. This may result in trite small-talk and the inclusion of rumor rather than fact. These factors could have increased impact with SNG since more viewers may be exposed to such events. Those involved may realize the story is receiving broader coverage, reaching more than just the local audience, and this may affect their behavior. This has proven to be the case, especially with politically-oriented groups.

Live coverage like this impacts on the journalist, as well. In most cases, a story can be delivered more effectively after the reporter has the opportunity to do research. She or he can then put together a more insightful and comprehensive package. Unfortunately, some reporters call the SNV a "butcher block" because it's used to edit a story together very quickly.[21] This means they have little time to add detail and meaning to those stories, at least initially. This lack of perspective, along with the accompanying stress, must have some effect on the journalist's final output. The way news events are reported has an effect on the way they are understood and remembered. Even subtle changes in visual material can result in differences in story perception.[22]

Some stories demand live coverage because of their significance and dramatic nature. Some require it because of their human interest, or their meaning and familiarity to the audience. But these situations are much less common than the average event. Unfortunately, some news directors and general managers feel compelled to use live coverage, even when it is unnecessary. The rationale is that an enormous amount of money was spent to purchase satellite equipment, and the station must make the most of its investment. After all, a TV station is a business and its interests go beyond unselfishly providing information.

What effect might this have on the viewer? The audience has become used to, and now expects, live coverage at the

local level because of ENG. Generally, viewers are more sophisticated and less impressed by technology. Although typical viewers may not be able to distinguish between ENG and SNG, they recognize whether they are seeing a non-event or whether it calls for live coverage. If what they are seeing isn't important, they are amused and angry at the same time - "amused because you are going to so much trouble to cover something that isn't important, and angry because you're wasting their time."[23] This damages credibility. However, some misguided folks still believe that if they see it on television, it must be important. This concept is called prestige conferral and can magnify the importance of some events.[24]

Station managers must remember that not all viewers are as sophisticated as the equipment. Simply having the technology does not make the information it provides more important or more accurate. Using it when it may give the wrong impression does not serve the public interest.

More often than not, broadcasters deliver their news live-on-tape rather than live. While some of the same problems with live coverage exist here, live-on-tape presents issues of its own.

News directors or editors send their station's SNV to cover a story whenever an event would be enhanced by local coverage, usually when that event is particularly relevant to a station's market. Many people involved in television believe the visual part of television should be used to its fullest, even though it is not exactly clear what that means. They have a firm belief that using video tape enhances the stories impact on the audience, and market research has indicated that the audience prefers to see activities as they happen.

Live-on-tape means the story is shot on-location, often with the reporter doing interviews and the camera operator shooting video. This is put into a package for showing at a more appropriate time. This is often the upcoming newscast or

bulletin, and the reporters may be seen doing live standups, introducing reports. These packages may also be shown during subsequent newscasts.

Live-on-tape allows viewers to participate vicariously in news events, getting the viewer involved in what's going on. It distinguishes television news from other media, such as newspaper or radio. And even though the event is not live, it is used to create the impression that the audience is seeing things as they happen.

Reality is captured and presented in such a way that viewers may believe they understand just what took place. Some people question whether this is really the case.

Often, a television news story is chosen because of its visual content. Because television is a visual medium, it focuses on overt actions, things that can be easily grasped through the eye but are difficult to understand in detail without explanation. Research has shown that viewers comprehend concrete facts from video taped material more easily than they do abstract facts.[25] However, concrete facts, such as location or the faces of people involved, receive visual reinforcement more often. Unfortunately, those concrete facts are not always what the story is really about. News coverage becomes superficial and true understanding is sacrificed.

Visual material, including video tape and stills, is often added *ex post facto* to written material to increase impact. While the audience's attention may be increased, the informational value actually depends on how well the visual material supports what is being said, and which parts of the story the visuals reinforce.[26] The audience might enjoy looking at the visuals; but if the visuals do not contribute to what is being said, they might distract the viewer from receiving more valuable information. Video taped facts (concrete) may cause the viewer to miss other facts (abstract) which are essential to overall story comprehension.

Broadcast news also tends to limit coverage of important events which have little in the way of physical action. This includes such things as political or legal decisions. Stations may include file tape in order to provide visual accompaniment. Once again, this may serve only to distract the viewer, rather than adding to her or his information content. SNV capability at the local level may compound this problem by encouraging more coverage of animated action at the expense of inanimate action.

Television news in the United States tends to emphasize conflict, violence and intense social activity while simplifying the reasons behind it. In some cases, this serves to increase ethnic and racial bias. The story may display disruptive behavior while failing to adequately discuss underlying causes. For instance, during "race riots" video is often taken of smashed windows and overturned automobiles. An appropriate explanation of why these events occurred is rarely offered.

During coverage of foreign news, negative and/or violent events often receive more attention than do positive and peaceful ones, especially in the Third World. A study by Cohen and Bantz showed that physical aggression is more likely to be reported and shown during foreign items than during domestic ones.[27] This means that topics viewers may be less familiar with and less interested in also contain more visual distractions and less explanation.

The fact that more video tape of this sort is available with satellite news gathering may prove to be a disservice to viewers, if handled improperly. While there is more access to video tape from more places, there is also increased pressure for the local journalist to write well. The communication aspect of a story depends on how it is approached - on its written content even more than its visual content. This places added responsibility on the journalist to understand underlying issues and how their presentation can affect audience comprehension. Local reporters covering stories in

distant places may find it difficult to know where to look for answers . . . answers to tough questions they must ask. Reporters covering major stories in their communities for the independent satellite news services must look even deeper. If viewers across the country are to understand why these events took place, the local journalist must provided more that just superficial coverage. Reporters in their home towns, putting together stories from video and audio services, must have the necessary information and must be able to recognize the important issues.

Television news is event-oriented and focuses on actions easily caught on tape, seldom going into detail about why events occur. In defense, broadcasters argue that there is too little time in a 30-minute newscast, minus commercials. It is assumed that people can turn to newspapers for more detail. However, television has led as the main source of news for a number of years, steadily increasing over newspapers.[28] This places much of the responsibility for explanation on the shoulders of TV journalists. Because of satellite news gathering techniques, much of this responsibility may shift from the broadcast networks to the local station. The burden is awesome.

News coverage reflects not only events of stories, but the business needs of TV stations. These needs often shape a station's newscast as much as the news itself. News programming is designed to create and hold audience interest. The entertainment value of a newscast has become a major consideration. Too often, newspeople wonder if their packaging is good, rather than if they are communicating well.

As Tom Brokaw said, TV news has become "a hit and run business, racing from one trendy issue to another - bedazzled by technology."[29] Using presentation styles designed to hold audience attention through entertainment value or emotional impact could result in pleasing but ineffective communication.[30]

These issues are not strictly a result of SNG. SNG merely compounds these issues which were born with ENG, i.e., the ability to easily go live and to video tape events. It has been said by some observers that because of SNG, local newscasts could replace those of the networks.

This might mean that instead of a very small number of national newscasts each night, there would be hundreds of local newscasts containing national and international news. It would be interesting to discover whether this additional competition, especially within the same market, would result in delivery of more thorough information or an increase in techno-glitz and entertainment.

SNG offers tremendous opportunity. However, what the viewer sees is simply a combination of decisions made by reporters, camera operators, producers, and directors. The medium in NOT the message. The message is what news people create, and they must choose wisely in order to provide sound broadcast journalism.

Local stations use SNVs for a variety of reasons. All of these reasons contribute to the station's ability to cover local and regional news quickly and, often, live. SNV can be used for both hard and feature stories although it is used most often for breaking news.

SNG increases certain problems that are also associated with ENG. SNV reporters must react faster, often having little time to mentally process information before they deliver it. Stories are sometimes carried live when they might be more reasonably carried at a later time. The inclusion of visual material may distract viewers from the essence of the story. This essence might be more effectively expressed through oral presentation alone.

## Independent Satellite Newsgathering Services

Perhaps the greatest impact of satellite news gathering technology, to date, comes from the use of satellite news

gathering services, since their use is much more widespread than that of SNVs. While only 92 of the over 950 local U.S. televisions stations use SNVs,[31] a 1985 survey showed that over 70 percent of all local TV stations subscribed to at least one syndicated satellite news service [32]. A 1987 survey found that over 90 percent of its respondents (N=71) were affiliated with one or more SNG networks or services.[33]

Stations receiving satellite news gathering services do so for a variety of reasons, and receive services in a variety of ways. Stations which are affiliates of major broadcast networks may receive satellite news feeds from ABC, CBS, or NBC. Each of these networks has designed its own system of service, which will be discussed in Chapter Three.

Some stations which own SNVs and are members of independent SNG cooperatives gather their own news, as well as provide news to other members of the cooperative. They also receive news from the cooperative and its members.

Other stations merely receive feeds from the services, rarely, if ever, providing stories. Since audio and video feeds coming by satellite are two separate but parallel signals, receiving stations can use the resulting story as a package. Many stories seen by the audience were originally features produced for local programming in another market. Receiving stations may also choose to use only the video portion, writing and delivering the content themselves from information gathered from the same news service or from another. They are free to use the material as they wish.

SNG services are comparable to national and international wire services. Some people refer to them as sort of an "electronic AP", feeding stories to their members for repackaging. This gives local stations increased flexibility and diversity, and allows them to cover stories from distant places, often with a local angle.

The main reason for using SNG networks is to furnish local stations with coverage of breaking news events, no matter how far away they occur. This gives local stations

more control over news programming, and provides viewers with up-to-the-minute news coverage from around the world. However, SNG can be used to provide timely feature material, as well. Health and medical issues seem to be popular and have become very important to local TV news. As one news director put it, "All good stations do market research and in ours, health just kept coming up." Another news director said he found that the two items people are most interested in were health and weather.[34] Because of this, many stations have made health coverage a regular part of their newscasts, like sports and weather.

One of the satellite news offerings made available to stations is "Health Matters", a half-hour program from Midstar Productions. "Health Matters" is much like "PM Magazine" in that it uses local anchors to deliver feature stories of national interest, prepared by the news service.[35]

## Some SNG Organizations

**NIWS and LPN.** Health and medical related programming such as "Health Matters" are part of the materials prepared by News Information Weekly Services (NIWS) and the Local Program Network (LPN). These two independent satellite news gathering services began several years ago when alternatives to the broadcast networks were first forming. Both services also provide their subscribers with features that are tied to breaking stories. The advantage is that subscribers know in advance about upcoming material, giving them time to prepare a local angle. Because of the split audio track, stations can use their own audio or that of the network.[36]

The major advantage of NIWS is that it provides background material and examines issues behind the news itself. It is often used as a supplement for local coverage, providing information stations may otherwise be without. NIWS also provides speciality reporters who cover such topics as entertainment and personal finance.[37]

The news director at LPN says its service is comparable to Time or Newsweek in that the material it provides is not "spot news, per se." LPN also provides a weekly interview service from Washington, D.C., put together through the use of Ku-band trucks. Even though the material is gathered in Ku-band, it is shifted onto C-band for transmission to accommodate the majority of its subscribers.[38]

**Newsfeed.** Another independent satellite news service which has been around several years is Group W's Newsfeed Network. Created in 1981, Newsfeed was the first news gathering organization designed specifically to use satellites for the exchange of news material. Its news director claims that they are "in the relationship business," acting as a liaison between stations. He says that simply purchasing a SNV does not create the networks which are necessary for news sharing.[39]

Newsfeed has approximately 75 affiliates which receive and exchange news with members. It offers regular news feeds throughout each day, providing a rundown of upcoming stories. It also provides flash feeds when breaking stories occur.[40] Group W's Satellite Operations Center provides an average of 3600 transmissions each day from its fixed C-band antennas,[41] but it is also capable of putting C-band material onto Ku-band when necessary.

**INN.** Independent Network News (INN), which began in 1980, is another syndicated satellite news gathering service. INN feeds a half-hour newscast to subscribing independent stations each day. It has Ku-band SNVs at its Washington, D.C. bureau and at four of its contributing stations across the country. It leases time on RCA Americom's K-2 satellite and feeds over both Ku- and C-band transponders.[42]

**Monitor World Review.** A rather unique service has more recently been developed by The Christian Science Monitor in conjunction with Conus Communications. "Monitor World Review", which began operating last fall, provides "timely, pertinent international issues with an balanced perspective

and in-depth focus." It is the first news service in operation to provide international material specifically for local stations. Basic service includes satellite delivered news stories from world-wide sources. An interactive premium service is also available which allows local anchors to converse with on-location correspondents live from around the world. "Monitor World Review" began one year ago with 93 network affiliates and independent television stations, plus two broadcast organizations in Europe and Latin America.[43]

This type of coverage is especially popular with stations whose management takes pride in the broad scope of local newscasting. One of the first times this approach was taken was just after the U.S.-Soviet summit in Iceland in 1986. A Russian diplomat in Washington, D.C. answered the questions of 12 local anchors across the U.S., live via satellite.[44] Interviews such as these were once only possible at the network level.

One of the most compelling reasons a station joins a SNG cooperative is that it allows it to share information, talent and facilities with other stations, significantly increasing its access to news coverage. News cooperatives such as Newsfeed or Conus afford such opportunities, especially to those stations who operate a SNV. Video which is uplinked by SNV to its home base is also available for use to other members of the cooperative. Therefore, members can rely on other members to provide them with news coverage from their areas.

**Florida Cooperative Arrangements.** A creative situation has developed in Florida where three cooperative news organizations have emerged since the mid-1980s. Independent satellite news consortiums were developed in Florida partly to improve hurricane coverage. They use satellite technology to bring weather warnings to viewers without waiting for microwave relays or radar wire feeds from the National Weather Service. Member stations have also used these networks to combine political coverage - sharing

reporters and in some cases, costs.

One of the networks formed in Florida is an *ad hoc* regional cooperative known as the Florida News Network (FNN). FNN was formed in 1985 by four local stations who wanted to make the most of their SNVs. According to one of the news directors, a few people got together with a "pipe dream" to create a workable system. He adds that not only has FNN merged technologies and resources, but it has combined "similar news philosophies" as well.[45]

FNN operates as a loosely formed cooperative and is much different from the more organized national services provided by Conus. It offers important regional services to its members who use their SNVs to gather and informally trade information around the Gulf Coast. Its daily half-hour feed consists of 12 to 15 stories that range from breaking news, to sports, to features.[46] FNN has been very successful and other groups have formed similar organizations across the country to share stories and raw video. The goal of these consortiums is local control, along with greater access to regional news.

The difference between FNN and Conus is in their organizational structures. Rather than being a casual group of regional stations, Conus is a highly structured, highly financed national consortium, although it does provide state and regional networks, as well.

**Conus.** Conus Communications began in 1984 when Stanley Hubbard, of Hubbard Communications, bought part of an orbiting satellite and began selling SNVs. News organizations who purchased these trucks could use the satellites transponders to relay pictures live from a news event to its station. This same technology was also used to create a news exchange between Conus members so they could share stories and raw video among themselves. As of December 31, 1987, 67 U.S. network affiliates and one independent station belonged to Conus Communications, along with two organizations in Japan. Worldnet, of the U.S. Information Agency, and Biznet,

a business-oriented network, are also members.[47]

Conus, an acronym for Continental U.S., is headquartered in Minneapolis, Minnesota where news exchanges are coordinated through its satellite control room. Members use Ku-band mobile uplinks to transmit to Conus Control in Minnesota, to their home stations, and to other Conus members. Although Conus has a manufacturing division which makes Newstar SNVs, members may operate non-Newstar vehicles. Transponder transmissions are sent via 2 Ku-band satellites - SBS-3 and RCA Americom's K-2.[48]

Hubbard Broadcasting controls four of the 16 transponders on RCA's K-2 satellite, paying $73 million for them over a six year period. However, the satellite itself was launched over the objections of NBC. The network feared the availability of such a high powered satellite might lead to its use as an alternative programming source for its affiliates, thereby damaging its business.[49]

Both RCA Americom and NBC are owned by General Electric. However, RCA went ahead with the launch saying a satellite such as this would have been launched anyway, whether it was done by RCA or someone else.[50]

SNV operators exchange stories 24-hours a day through the Conus News Service, which arranges transponder time, coordinates live and taped news coverage for members, and compiles Conus News Exchange. The news exchange, which is also open to non-SNV operators, offers a five-day or seven-day schedule of national feeds plus immediate availability of breaking news events. The news exchange is assembled by Conus itself, as well as by member stations. Conus pays its contributors for those stories which appear on the Conus News Exchange.[51]

Conus is also involved in a joint venture with the Associated Press (AP) known as **TV Direct**. This service, begun in 1986, provides two types of coverage out of the Washington, D.C. area. The first is raw footage, taped or live; second is edited, on-location stories reported by AP

broadcast journalists. TV Direct also provides videographics - full color video stills - to its subscribers. Conus Washington Direct, which provided live unedited coverage of press conferences and other events, has been merged into TV Direct.[52]

Conus Communications also offers coverage of international events to its subscribers. During the U.S.-Soviet summit in Moscow late this spring, Conus was the only non-network organization to furnish coverage to local affiliates. It sent live reports for its news exchange in addition to live interviews and customized reports. Conus also arranged uplink service for the "MacNeil/Lehrer News Hour", Univision, INN, and three local TV stations which sent crews to Moscow.[53]

**CNN.** Another satellite news provider operating out of Moscow during the May summit was Cable News Network (CNN), put together in 1980 by Ted Turner of Superstation WTBS in Atlanta. CNN, who took a crew of 55 to the Soviet Union, was the only American news organization to use a Soviet uplink and a transponder on Intersputnik for transmission. All three broadcast networks and Conus used Intelsat facilities.[54]

Although CNN's original and principle function is to provide news for cable systems, it also offers two, 24-hour syndicated news services for broadcast use. "Headline News" provides a 30-minute news cycle throughout each day including news bulletins every hour. "CNN", on the other hand, supplies in-depth coverage, much of it live. Unlike broadcast networks, it has the option of staying with a breaking story for hours if necessary.

For instance, CNN had the dubious good fortune to be covering the Challenger launch on January 28, 1986, when most other news organizations thought it was too routine to carry live. CNN stuck with its coverage for hours after the explosion, ultimately receiving a 1.8 rating - its fourth highest ever. It also furnished live coverage of the following Roger's Commission investigation during the

afternoons. According to a CNN vice president, they "beat the soap operas all to hell."[55]

CNN offers its subscribers, both cable and broadcast, several different levels of service. Stations may air sections of "Headline News" or they may extract individual stories. They may also use stories from the main CNN service. In addition, they can use live, breaking coverage from either service.[56] CNN is quite flexible and tries to meet the needs of its subscribers.

The primary advantage of CNN is its 24-hour, live coverage from around the world. But, some stations use CNN as a programming service, in addition to source of breaking news. For example, a broadcast station in Pittsburgh runs it through the night when ABC is off the air. And, a station in Indianapolis uses CNN footage from overnight to help fill its early morning newscast.[57]

CNN also offers a distribution and support system for SNV users. It arranges transponder time, provides help and advice in truck purchases, and encourages stations to work together, sharing material among themselves and CNN. Like Conus, CNN does not subsidize truck purchases the way the broadcast networks do. However, there are also no conflicts regarding other news alliances. Members may use CNN facilities to send feeds wherever they choose. CNN says the key to its service is flexibility and economy.

CNN has been operating via satellite for over eight years, and in that time, has gained equal stature with broadcasters as a major news service. Between "CNN" and "Headline News", the company has nearly 200 broadcast affiliates,[58] and the popularity of its news cooperative is growing.

## Conclusions

Obviously, local news stations have a variety of organizations to turn to for SNG services. According to the

NAB survey on SNG, of its respondents who used SNG (N=64), 51.6 percent used Conus. 25 percent used SNG services provided by NBC; 22 percent - CBS; 17 percent - ABC; 11 percent for both FNN and CNN; 9 percent for Newsfeed; 1.6 percent for both the Central Florida Teleport and News Express (GTE); and 9.4 percent was unspecified.[59] NIWS, LPN and INN were not specifically mentioned.

The above percentages include multiple mentions. This is because many news organizations subscribe or belong to more than one satellite news gathering service. This often leads to complex situations, and stations sometimes cross network lines, supplying news stories to a competing broadcast network affiliate.

Many of the stations which use independent news sources began doing so because they felt the broadcast networks were not responsive to their needs. They did not provide enough coverage about events happening within the regional sphere. They did not provide local stations with video for national and international stories. After all, if viewers saw it at 6 p.m., why would they watch the network news at 6:30? To combat this problem, local stations turned to non-network sources for additional coverage.

Satellite technology has made it possible for local stations to gather their own news and to share that news with other local stations. The traditional broadcast network role as provider of regional and national news has been permanently altered.

Stations now have the ability to cover news events any where around the world, either through news cooperatives or with their own SNVs. Technology has made it possible for them to decide which stories they will cover, how they will cover them, and in how much detail. Before the availability of Ku-band satellites and organizations such as Conus, stations had to rely on the broadcast networks because they were the only ones with the ability for live interconnection with America's TV stations. Now independent news organizations can

simultaneously reach subscribers through the use of satellites like RCA's K-2, making SNG an economically viable option. Subscribing stations may now choose what they want to air, when they want to air it, and even how it will be edited.

Local stations are now capable of putting together very individualistic newscasts, similar to the town newspaper. News cooperatives feed stories and raw video to stations much like the newspaper wires. They can utilize material from the various satellite services to report world and national news to their local markets. They are competitive with the networks and many have facilities that match that of the networks. Local stations can even broadcast from Europe, Africa, or Asia if they so choose and their budgets allow. As a Miami news director said, they don't usually want to do that, but "now we have the flexibility the networks have."[60]

Before satellite technology and its application as a news gathering medium, local stations were incapable of covering national and international stories with any kind of expertise or continuity. Most often, these stories were simply read by anchors during the local newscast. Occasionally anchors and reporters from larger markets, or stations with a strong local angle might cover a major story from some place other than its own market. But, usually they had to rely on the graciousness of their networks to get the story back to their own ADIs. Many times, the stories were just simpler versions of the network story. With today's technology and well-developed news gathering organizations, local stations can bring the story home themselves, explaining how distant events affect the local community. Increased coverage of this type has changed what the nation's viewers see. While a common idea runs through the country's news organizations of what news is and how news should be covered, the potential exists for a variety of approaches to the same story because there are more and different people covering it. In addition, these people are responsible to more and different

hierarchies. Three or four networks no longer have a monopoly on news gathering.

Local stations would be unable to do this without the news organizations that make it possible. In the past, the broadcast networks did not provide this type of service to the local station because they did not see it as their role in the scheme of news delivery. However, things have changed for network news as well as for local news.

This chapter has discussed the rise of independent news gathering services and the use of satellite news gathering vehicles. The emergence of these technologies allows stations local control and autonomy. The following chapter will discuss these changes and how the broadcast networks have adjusted to meet the challenges satellite technology has brought them.

## REFERENCES

### Chapter II


1. Yoakam, Richard, and Cremer, Charles, ENG: Television News and the New Technology, Southern Illinois University Press, 1985, p. 314.

2. "SNG altering network-affiliate relationships," Broadcasting, 12-16-85, p. 72.

3. "Extending a station's reach a little farther," Broadcasting, 7-14-86, p. 46.

4. Lacy, Stephen; Atwater, Tony; Powers, Angela, "Use of Satellite Technology in Local Television News," accepted for publication in Journalism Quarterly, 1988.

5. "Extending a station's reach," p. 45.

6. Standish, Kim, "Satellite News Gathering: The Next Round," RTNDA Communicator, 9-86, p. 38.

7. Broholm, John, "SNG Research," RTNDA Communicator, 11-85, p. 27.

8. Lacy, Stephen; Atwater, Tony; Qin, Xinmin; Powers, Angela, "Cost and Competition in the Adoption of Satellite News Gathering Technology," Journal of Media Economics, 1988, p. 51.

9. Ibid., pp. 51-52.

10. Standish, p. 37.

11. "Satellites and the shifting balance of television news power," Broadcasting, 12-8-86, p. 62.

12. Standish, p. 42.

13. DeSonne, Marcia, "Satellite News Gathering Survey," National Association of Broadcasters, 3-87, p. 3 & 7.

14. "Extending a station's reach," p. 44.

15. Standish, p. 38.

16. "Extending a station's reach," p. 44.

17. Shaffer, David, "By van and satellite, local newscasts are going national," The New York Times, 12-21-86, furnished via Conus member Packet.

18. DeSonne, p. 9.

19. Dawson, Greg, "Out with the old, in with the news," Orlando Sentinel, 3-13-87, furnished via Conus member Packet.

20. "Of Special Interest," NBC Corporate Communications, 12-87, p. 2.

21. Shaffer, p. 2.

22. Gunter, Barrie, "Poor Reception - Misunderstanding and and forgetting broadcast news," Lawrence Erlbaum Associates, 1987, p. 225.

23. Yoakam, p. 250.

24. Head, Sydney & Sterling, Christopher, Broadcasting in America, Houghton Mifflin Co., 1987, p. 414.

25. Gunter, p. 315.

26. Ibid., pp. 226-227.

27. Ibid., p. 161.

28. Gunter, P. 8.

29. Brokaw, Tom, "Viewpoints," Television and Radio Age, 9-15-86, p. 95.

30. Gunter, p. 308.

31. "The satellite newsgathers," Broadcasting, 7-20-87, p. 73.

32. Josephson, Sanford, "Use of alternative TV news services keeps growing," Television/Radio Age, 10-28-85, p. 29.

33. DeSonne, p. 1.

34. Josephson, pp. 82-84.

35. Ibid., p. 84.

36. Ibid., p. 82.

37. Ibid., p. 82.

38. Ibid., p. 82.

39. Standish, p. 39.

40. Josephson, p. 30.

41. "Satellite technology discussed in special meeting in Washington, D.C.," SMPTE Journal, 3-87, p. 274.

42. "Web news plans forcing TV stations to weight loyalties," Television/Radio Age, 3-3-86, p. 92.

43. "Conus, The Monitor team up to form worldwide TV news service," The Christian Science Monitor, 7-27-87, p. 1.

44. Shaffer, via Conus.

45. "Satellite news gathering gaining a foothold and then some," Broadcasting, 7-8-85, p. 68.

46. Josephson, p. 84.

47. Conus Communications, 12-31-87, member information packet.

48. Ibid.

49. Bork, Robert H., "Conus the barbarian," Forbes, 11-4-85, via Conus member packet.

50. "Hubbard shares his Conus vision," Broadcasting, 2-3-86, p. 56.

51. Conus user packet.

52. "AP, Conus form satellite feed news service," Broadcasting, 6-2-86, p. 57.

53. "Bringing the news back from Moscow," Broadcasting, 5-23-88, p. 37.

54. "Live from Moscow: the Reagan-Gorbachev summit," Broadcasting, 5-30-88, p. 23.

55. Livingston, Victor, "CNN's live type pays off in ratings and public image," Television/Radio Age, 8-18-86, p. 56.

56. Josephson, p. 30.

57. Ibid., p. 31.

58. "Web news plans forcing loyalties," 3-3-86, p. 92.

59. DeSonne, p. 6.

60. Standish, p. 40.

57. Ibid., p. 31.

58. "Web news plans forcing loyalties," 3-3-86, p. 92.

59. DeSonne, p. 6.

60. Standish, p. 40.

# CHAPTER III

## IMPACT OF SNG AT THE BROADCAST NETWORK LEVEL

This chapter briefly describes network satellite services offered to affiliates. It goes on to discuss motives for the rise of these services. It also discusses the present position of the nightly network newscast and what can be done to maintain and improve that position.

### Network Considerations

All three of the major broadcast networks have substantially improved satellite offerings to affiliates by increasing the regularity and quality of news feeds, by facilitating news exchanges, and by offering to partially subsidize affiliate purchase of SNVs. This increased use of satellite technology for delivery of news came partly in response to the rise of independent satellite news gathering networks and cooperatives. Logically it seems that use of satellite technology by the networks would have naturally grown without this external threat, simply because it is more efficient. Still, many news directors believe the broadcast networks are now more responsive and considerate of affiliate needs. This appears to be a direct result of the realization by network news executives that the networks can be replaced if they do not offer more and better service. They must provide affiliates with the types of services they can not provide for themselves.

Each of the three networks has traditionally approached ideas and problems in different ways, and their approach to SNG support at the affiliate level is no different. However,

arrangements at ABC, CBS and NBC have several similar aspects. Each subsidizes up to 50 percent of the costs for Ku-band satellite trucks. This subsidization comes in the form of reimbursement over a five-year period. As an alternative, stations may opt for partial reimbursement of fixed uplink costs.[1] The networks also coordinate affiliate uplinking and arrange transponder time. In addition, each has certain technical specifications regarding the SNV in order to qualify for reimbursement.

Response to network offers for subsidization have not been as eager as some might have expected. Station managers considering purchase might still see initial expenditures as prohibitive. Basic truck costs are high, but network approved trucks, with added requirements, can run even higher. Affiliates who purchased trucks before the subsidy plan took effect were also reimbursed if they retrofitted their trucks to meet network specifications. However, they found that this was more complicated and expensive than they expected.[2]

## Major Broadcast Networks

**NBC.** Network arrangements for subsidization and increased satellite services differ in a number of ways as well. For instance, ABC and CBS have established regional feeds to their affiliates on a daily basis. NBC, on the other hand, operates on the theory that "news is not based on geography" and that regional feeds are too limiting. Instead, it has put more energy into both its national feed and its Ku-band satellite interconnect system.[3]

One of the technical specifications required by NBC for Ku truck subsidization is the use of a transmission package which provides communication lines between the truck, the station, and network control. It also gives the network remote control of uplinking. NBC pays for installation of this $30,000 interconnection system.[4]

NBC's SNG operation is known as Skycom. Skycom, which

helps affiliates with the logistical aspects of transmitting and receiving stories point to point, provides 24-hour, dedicated satellite transponder time which can be purchased by affiliates for approximately $14 per minute. A minimum of five minutes is required.[5]

According to the vice president of affiliate news services at NBC, larger affiliates prefer this ad-hoc arrangement. She says they want to be sure they can get their stories from truck to studio, and to each other, without problem or delay. Smaller stations, however, have requested more regional feeds in order to broaden the scope of their newscasts.[6]

NBC has tried to accommodate these smaller affiliates. Its A-News, short for Affiliated News Service, consists of material distributed by the network which is usually not shown on the network newscast.

Skycom can be used to accommodate regional exchanges, as well. This is accomplished through use of semi-portable uplinks, known as PUPs, which can convert a station's satellite receiver into a receiver/transmitter in about four hours. Over 60 NBC stations have been pre-wired for this as part of the networks plans for overall Ku interconnection.[7] Stations obtain blocks of NBC satellite time in order to operate these state and regional cooperatives for daily news exchange.[8]

NBC was hesitant about announcing plans for SNV reimbursement, although it became the first to be fully integrated with Ku-band capability. NBC News president Larry Grossman admitted this offer was made in response to similar offers being considered by CBS and ABC, and to the rise of independent satellite news services. Grossman also stated that affiliates with subsidized trucks would be expected to allow free network use of the truck when the occasion called for it.[9] However, the affiliates are not contractually obligated to allow network access to the truck. The affiliate controls the SNV legally. Still, a "cooperative spirit" is

expected by the network.[10] Although NBC places no restrictions on the use of the truck, use of transponder time is limited to NBC purposes only. Affiliates are also required to place the NBC logo somewhere on the truck.[11]

**CBS.** CBS offers a cost-sharing plan known as NewsNet which linked the network itself and six existing regional news services with affiliate-owned Ku trucks or fixed uplinks.[12] Fixed uplinks are offered to stations which wish to be directly involved in SNG but do not want the expense of owning and operating a SNV. Instead of using Ku trucks to circulate stories produced by individual stations, fixed C-band antennas serve as uplink centers, allowing stations to participate without mobile uplinks. Stories may be supplied by Ku-band users and translated into C-band for reception by stations without Ku capability. C-band-only stations may also provide feeds. In this way, national and regional feeds via the C-band distribution system can be integrated with news being supplied by Ku-band sources.[13]

As with the other two networks, CBS pays up to half the truck and fixed dish costs, as well as total costs for a communications package. In return, participating stations give the networks one minute of commercial time between midnight and 1 a.m. The affiliate must also provide free use of the truck to CBS News for coverage of major breaking events.[14]

Regional satellite news experiments began at CBS in early 1984 in the Southwest region. This was followed later by C-band feeds in the Southeast, West, Midwest, Mideast, and Northeast. CBS network feeds have become very important for affiliates, even in the larger markets. Unfortunately, some stations have complained that the feeds contain too much non-breaking news, that there is too much information to screen, and that these regional feeds cover too large a geographical area. This means many stories fall outside their viewer's range of interest.[15]

When CBS announced its SNG plans, six months after ABC

and NBC had presented theirs, its president said CBS wanted to be the place where affiliates turned for these kind of services and resources. He also said the networks must not let affiliates go to Conus, Westinghouse, or FNN.[16]

**ABC.** ABC announced its 1.8 million subsidy plan late in 1985. At the time, network executives said it would reimburse stations for up to $180,000 for purchase of a SNV, the goal being the potential for live capability anywhere across the country.[17] The network intends to supply Ku-band uplinks to affiliates in geographically dispersed markets around the U.S. which will then be able to relay by satellite, live signals back to headquarters in New York City and Washington, D.C.[18]

ABC's plan has two interdependent parts. Absat deals with SNVs based and owned by the affiliates which use them for their own news gathering purposes and in conjunction with regional networks. Costs are shared between affiliate and network. ABC has also launched a syndicated news service called NewsOne which coordinates regional feeds, distributed to affiliates for a fee. These feeds contain news, sports, and features, as well as national and international news. NewsOne is an expansion of ABC's Southwest regional feed, an experimental regional feed which began in the summer of 1985. NewsOne replaced ABC's syndicated news service, Daily Electronic Feed (DEF).[19] NewsOne and Absat are designed to work together, feeding stories via Ku-band truck to ABC News headquarters. NewsOne provides affiliates with edited material via C-band.[20]

Affiliates with subsidized SNVs have contractual commitments to the network. During breaking news stories of "national magnitude", such as a natural disaster or political assassination, ABC gets priority use of the station's SNV without charge. During feature stories and more regular news coverage, the network will negotiate with the affiliate on truck use and fees.[21]

## Motivation for Supplying SNG

Most people involved with television journalism feel network offers for satellite-interconnected feeds, news exchanges, and SNV reimbursement were a great idea, albeit a little late. This was the main topic of conversation at the RTNDA Convention in September, 1985. Many attending believed network proposals were merely a reaction to the established independent satellite services such as Conus, Newsfeed, and FNN. One news director said the networks "finally woke up" when they put a plan for expanded satellite-based service before the affiliates. He said such a plan should have gone into effect several years earlier. By doing this, he said, the networks may have avoided competition from the independent cooperatives.[22] At least one network news executive acknowledged that the networks were slow to develop enhanced news services and that they had not done enough for affiliates.[23]

With the networks' offer in place, a number of local stations quickly took advantage. A news director in California said SNG was something they were planning to do anyway, but now they would not have to rely on ad hoc networks. Another California news director said the satellite feed his station receives is "miles ahead" of what the networks offered before; and, that his station was providing and receiving several stories each day. He also said his station could purchase a Ku truck much sooner now and the reimbursement plan was going to be a great help.[24]

A number of affiliates had been using independent services when the networks made their respective offers. The addition of network satellite offerings created conflicting commitments for these stations. For instance, a Gannett owned station in Phoenix is also an NBC affiliate and part of the CNN system. The news director said he had difficulty deciding which organization to send feeds to first, since he felt a responsibility to each. Of the Gannett stations, three are

NBC affiliated, three ABC, one CBS, and one independent. A Florida station had CBS-Conus conflicts. On a story that both networks want, he says Conus gets the live shot and CBS receives raw video and sound bites.[25] Conflicts like this continue to be a problem when a station chooses to be part of more than one satellite news service.

However helpful the expanded services are, questions have been raised regarding the intent of the broadcast networks. Some people say the networks offer such services in order to strengthen affiliate dependency on the networks. They say it is insurance against further growth of satellite syndication and locally produced news programming. Others say the networks are trying to reassert control over affiliates, discouraging them from doing things themselves. All of this is probably true to some degree. Stepping up satellite service was an excellent business move, and network news executives were certainly sharp enough to realize this. It is also true that aggressive news gathering at the local level sometimes directly benefits the networks by providing them with video and locally produced packages for airing on network newscasts. It also strengthens the networks' image as a whole.

## Future of the Network News and the Nightly Newscast

ABC, NBC and CBS have all enhanced their news services to affiliates across the country in response to technological capability and competitive pressures. These are not the only changes the networks must make in their struggle to stay at least one step ahead in the game. Because of SNG technology, local stations have the potential to become direct competitors of the network newscast. The networks must continue to take decisive action in order to maintain their increasingly precarious positions as primary sources of national and international news.

News has been a part of network television for many

years, and has grown into a highly financed business. During the 1950s, 60s, and especially the 70s, it seemed as though news programming might make the networks a reasonable profit. Since the 1980s, however, it has taken a "major nosedive", losing up to $100 million a year for each network on budgets of $275-300 million.[26] One reason for this is a loss of viewers, especially younger viewers who are less interested in news programming. With fewer viewers, ratings and advertising revenues drop. Another major reason for this harsh economic decline has been competition from alternative sources of television news by independent satellite services and local affiliates.[27]

According to NBC News consultant, John Rose of McKinsey and Co., the wider scope of local coverage may be affecting network news the most. Rose, speaking at the Center for Communications in New York City in March of 1988, used videotape examples to demonstrate his point. He showed how local and network newscasts today sometimes air the same stories, sometimes using the same or similar video. Ten years ago network and local stations concentrated on different stories. When they covered the same stories, they covered them from very different angles.[28]

With the shrinking number of broadcast viewers overall, declining profits, and an increase in technology and its costs, broadcast network news is now being judged "not merely by its lead story, but by its bottom line." In other words, the future of network newscasting may depend on whether it can turn a profit. At present, costs have overtaken revenues. Lawrence A. Tisch, owner of CBS, is reportedly questioning the enormous losses of its "22 minute news program."[29] The new corporate owners of ABC and NBC have already invoked a "kind of austerity" that has hit the news divisions especially hard.[30]

Fred Friendly, former president of CBS News says he sees a "great natural resource just going down the sink." Avery Westin, vice president of ABC News, said the networks must do

something to demonstrate that the networks are doing something irreplaceable. He says local station managers must be shown that the networks are doing something local stations cannot do because they lack the resources and expertise.[31]

Just what is it that networks do that local stations are unable to do, or are unable to do as well? For one thing, the networks have a much larger capacity to originate newscasting from anywhere in the world. This is especially important on the international scene. Networks have been covering international news for many years and have had the opportunity to weave channels of communication within significant circles.

Lack of such connections means that hundreds of local news teams who went to the Geneva summit in 1985 found themselves waiting in press rooms, unable to talk with any participants. According to the news director from one of the attending stations, which spent $30,000 in Geneva, it is difficult for an independent news organization to "really get inside" unless they have some clout.[32] That may be one of the reasons only three local stations chose to go to Moscow for the summit meeting between Reagan and Gorbachev in May of this year.

Another reason most local stations stayed away from the Moscow summit when they might otherwise have gone may be because they are concentrating their energies on this summer's democratic and republican conventions. With local stations playing a larger role at the conventions, the broadcast networks must find a new niche for themselves here. That niche seems to be helping the affiliates.

The three major networks, along with CNN, are making it possible for the affiliates to do their jobs in Atlanta. Each network is providing work space, editing and communications equipment, and uplinking for 20-40 affiliates. There is an eagerness by the networks to do whatever they can for the local stations, and they are spending money to do it. According to the executive producer of special events for CBS

News, this type of commitment makes affiliates stronger, and gives them another reason to need the networks. The local stations will cover the local angle, leaving the broader, national scope up to the networks.[33]

Network crews at the convention will be drastically reduced from previous years. In NBC's case, it will have about 50 percent fewer workers. Even though the networks are playing a reduced role, network executives are resigned to their fate. They realize the networks are no longer the only source of coverage ... that local stations have the technology and desire to cover the convention, as well. Executives still see the network role as important even if it is limited to what some call a "civics lesson." The networks intend to give in-depth coverage and analysis of convention processes and issues. They want to explain so that people understand what is really going on.[34]

NBC plans a "novel twist" for its coverage of both conventions. According to Larry Grossman, the network will stage live discussions between citizens around the country and party delegates and leaders in Atlanta and New Orleans. He wants to open up the convention to the American people using a "town meeting" format.[35] Network commentators will facilitate these discussions, using network facilities.

This commentary, analysis and national perspective may save the network newscast. Without it, network news could be reduced to simply providing audio and video materials to affiliates for repackaging, while local anchors and news teams go off to cover events around the nation and the world, sharing stories and information themselves.

With the new role of local television journalism, network newscasters have wondered what their role should be. Should they concentrate on the smaller, older audience that likes dependable news or should they compete with the majority of American viewers who like their news "like the rest of their television - soft on the eye and easy on the mind?" Should they presume their viewers already know the headlines and

want analysis? Should they concentrate on the big, international stories?[36]

The saving grace of the network newscast will be its ability to deliver national and international news with an "American" perspective, one that speaks to the national and not the regional or local perspective. This is the type of insight local stations cannot provide. Networks must differentiate themselves by providing more thorough journalism, going beyond what happened to why it happened and, if negative, how it can be kept from happening again. They must educate, not merely entertain. They must assume people already know what has happened; therefore, network newscasters must be more knowledgeable in their analysis. They must use all their resources to do what the stations do, and more.

The direction of television news has been influenced by several factors, including a growing variety of news sources. As Grossman says, the networks are moving toward more serious journalism with more content, perspective and history. The future of the network news business will continue to be "shaped by economics," trying to make the news more self-sufficient without compromising quality. Networks are eliminating bureaucracy, incorporating new technology, and "working more intelligently" to "divide up the pie" with local stations.[37]

The network newscast is in trouble and may not survive the tough economic times it faces. However, only 11 percent of the respondents in a 1987 national survey believed it was likely that local use of satellite technology would lead to stations dropping the nightly network news.[38]

This chapter pointed out that network affiliates now receive more national and international news from their respective broadcast networks. Many also participate in news exchanges via satellite and some operate SNVs which are partially subsidized by the networks.

Increased satellite services to affiliates is an attempt

to maintain strength within the network news divisions. The role of network news has changed since the emergence of SNG, and the future of evening newscasting at the network level has been challenged.

## REFERENCES

### Chapter III


1. "Satellite Footprints," Broadcasting, 1-19-87, p. 226.
2. Ibid., p. 226.
3 "Satellites and the shifting balance of TV news power," Broadcasting, 12-8-86, p. 64.
4. "Networks all on satellite news gathering bandwagon," Broadcasting, 7-14-86, p. 46.
5. "Ibid., p. 46.
6. "Satellites and shifting balance," p. 64.
7. "Networks on bandwagon," p. 46.
8. "Satellites and shifting balance," p. 66.
9. "NBC latest to offer subsidized Ku-band trucks," Broadcasting, 1-27-86, p. 66.
10. "Networks on bandwagon," p. 46.
11. "NBC latest of offer," p. 66.
12. "Network on bandwagon," p. 50.
13. "CBS unveils NewsNet," Broadcasting, 7-14-86, p. 37.
14. Ibid., p. 36.
15. "Satellites and shifting balance," p. 64.
16. "CBS unveils," p. 37.
17. "Web plans forcing TV stations to weight loyalties," Television/Radio Age, 3-3-86, p. 55.
18. "ABC making its move into SNG," Broadcasting, 12-9-85, p. 40.

19. Ibid., p. 40.

20. Ibid., p. 40.

21. "Networks on bandwagon," p. 50.

22. "Talk of the RTNDA Convention: SNG networks," Broadcasting, 9-23-85, p. 48.

23. Ibid., p. 49.

24. "Web forcing loyalties," p. 92.

25. Ibid., p. 54.

26. "Gloomy picture painted for TV network news," Broadcasting, 3-21-88, p. 51.

27. Ibid., p. 51.

28. Ibid., p. 51.

29. Randolph, Eleanor, "Network News Confronts Era of Limits," Washington Post, 2-9-87, p. 4, c. 1.

30. Benjamin, Burton, "Technology and the bottom line create profound changes," The New York Times, 7-17-86, Conus user packet.

31. Randolph, p. 4.

32. Ibid., p. 4.

33. "Fifth Estate sets up camp in Atlanta," Broadcasting 7-4-88, p. 26.

34. Ibid., p. 27.

35. "NBC announces news briefs," Broadcasting, 6-27-8, p. 58.

36. Randolph, p. 4.

37. "Grossman says TV news getting better," Broadcasting, 6-27-88, p. 58.

38. Lacy, Atwater, Powers, "Use of Satellite Technology in Local Television News," accepted for publication in Journalism Quarterly, 1988.

# CHAPTER IV

## A SURVEY OF SNG USERS

Previous chapters have provided general information gathered from magazines, newspapers, journals, and text books. The following chapter contains data gathered specifically for inclusion here.

### Objective

Information on the status of TV satellite news gathering operations was obtained from a survey of news directors and other news management staff at ten (N=10) commercial TV stations that owned or leased satellite news gathering vehicles at the time they were interviewed in July, 1988.

A second survey was taken of five (N=5) non-SNV users at the same time to gather information about future plans these stations had for increased use of SNV and SNG services.

### Method

Both surveys were administered by telephone. A questionnaire was developed during the writing of this thesis (Appendix A). However, questions were partially based on the March, 1987, Satellite News Gathering Survey by the National Association of Broadcasters.

A list of 92 SNV operators was used to select 10 broadcasters presently utilizing mobile Ku-band satellite news gathering trucks. This list was published in Broadcasting magazine in July, 1987.[1] Participants were randomly chosen using this list and a table of random

numbers.[2]

Participants in the second survey were selected from a list containing approximately 1100 U.S. television stations within the U.S. and Puerto Rico. This list was published in Broadcasting and Cablecasting Yearbook, 1988.[3] Once again, participants were randomly chosen using this list and a table of random numbers.

Twenty-six television stations were originally contacted before a sample of 15 respondents was obtained. Of the eleven non-participants, one openly refused to comply. An appropriate person was unavailable at the remaining ten non-participating stations.

## Results

Of the 15 total stations surveyed, 26.6 percent were NBC affiliates; 40 percent were CBS affiliates; 26.6 percent were ABC affiliates; one station was a combined NBC/CBS affiliate. No independent stations were surveyed. (Appendix B).

(See Table 1). ADI market size ranged from #13 to #213. Five stations were in the top 50; nine were in the top 100. One station (WIFR in Freeport, IL) had no ADI listing.[4]

Of the ten stations with SNVs, five were in the top 50 ADIs; eight were in the top 100. Of the non-SNV owners, one was in the top 100. The remaining three with ADI listings were in the the 100+.

Table 1: Market Distribution (N=10)

| *ADI Market | Number of SNV Owners | Number of Non-SNV Owners |
|---|---|---|
| 1-10 | 0 | 0 |
| 11-20 | 3 | 0 |
| 21-30 | 1 | 0 |
| 31-50 | 1 | 0 |
| 51-100 | 3 | 1 |
| 100+ | 2 | 3 |

* 1988 Broadcasting Cablecasting Yearbook

Reasons for SNV Use

(See Table 2). The reason most consistently mentioned for using a SNV was its ability to expand a station's coverage area. The ability to go live was also mentioned frequently. Competition was another factor, as well as immediacy, image, the ability to stay on-site, independence and technical capability. One of the news directors said that a Ku truck allowed them to "make a presence" and that SNV is "just the way it's done today." Another said owning a SNV gave them the ability to share with other "like-minded" stations. Another said they were "forced" to get a SNV since their competition had one.

Comparing these results with the 1987 NAB survey results discussed on page 29 of this thesis, it is apparent that expanded coverage area, the ability to go live and competitiveness remain the primary factors for SNV use. Business reasons were not mentioned in this survey as they were in the NAB survey. This survey also included several

mentions of geography, image, ability to remain on-sight, immediacy and independence. The NAB survey made no specific mention of these factors.

Table 2: Reasons for SNV Use (N=10)

| Reasons | Number of Mentions (multiple) |
|---|---|
| • Ability to expand coverage area | 8 |
| • Greater ability to cover news and to cover it live | 7 |
| • Current and future competitiveness | 4 |
| • Technical state-of-the-art | 1 |
| • Ability to provide or share feeds | 2 |
| • Geography makes ENG difficult | 1 |
| • Creation of image | 2 |
| • Ability to remain on-sight | 2 |
| • Independence from network | 2 |
| • Immediacy | 1 |

Range of SNV Coverage

(See Table 3). SNV coverage ranged from features to hard news, with breaking stories being the most often mentioned use. Coverage of sporting events was also frequently mentioned. One Minnesota station used its truck to cover the baseball World Series. Another used its truck regularly for remote newscasts, while one used its truck to cover stories from around the region which would be unreachable by terrestrial microwave relay.

Comparing these results with the NAB survey results listed on page 31 of this thesis, we see that breaking news remains the primary use for SNVs. However, emergency/disasters and emergency weather coverage fell well behind in this survey, compared to their second and third place ranking in the NAB survey. This thesis survey found sporting events to be the second most mentioned use for SNVs, followed by special events.

Table 3: Range of SNV Coverage (N=10)

| Event | Number of Mentions (multiple) |
|---|---|
| • Breaking news stories (Non-Emergency) | 10 |
| • Emergencies/Disasters | 1 |
| • Emergency Weather Conditions | 3 |
| • Special Events | 4 |
| • Sporting Events | 6 |
| • Local Public Affairs | 0 |
| • News/Documentary stories | 0 |
| • Entertainment | 1 |

Events Most Covered

When asked which type of event(s) were covered most often with their SNVs, nine out of ten said it was used most often for breaking news. One station said it uses the Ku truck most often for feature stories it can plan and promote in advance. Another said it is used consistently to cover University of

Florida sporting events. However, it also used its truck for breaking news most often.

Specific SNV Events

Stations were asked what types of events were covered with the SNV that would otherwise go uncovered without use of a SNV. Six out of ten said any story that was out of microwave range could now be covered. Three out of ten said they still cover the same types of stories, but now they cover them better. One traded in its helicopter so it could remain on-sight, editing and sending out stories from the truck. One news director said this "improved the quality" of its stories, since staying on-site allowed them time to deal with "editorial issues."

A station in northern Florida said it covers more news from Georgia with its Ku truck. It has also covered a chemical fire and a nuclear leak within its region. A station in Nevada said it covers brothel stories with its mobile uplink. A Pittsburgh station said it can now send back stories in a timely fashion from nearby towns located across the Pennsylvania hills.

Change in Network-Affiliate Relationship

(See Table 4). Another question asked news personnel if they felt the relationship with their station's network had changed since the station began using its SNV to gather news. Ten out of ten respondents indicated that the broadcast-affiliate relationship had changed since the station obtained SNV capability. Nine out of 10 said the change had been a positive one. Most felt the broadcast networks are more responsive to affiliate needs now that affiliates furnish the networks with satellite feeds. A station in Minneapolis said ABC saw the rise of Conus as a threat. Now affiliates can get requests from ABC much easier.

One respondent said affiliates are saving the networks money since the networks can get more material from them without bringing network reporters and crews to the area. Another said this has helped lead to a reduction in network news staff, further saving money for network news divisions.

Several respondents mentioned that crossing lines between the independent SNG services and the broadcast networks had resulted in some political considerations and some competitive faux pas. One news director said he put a story on the Conus feed and later saw it on his competition's newscast.

One news manager said the networks are no longer as "snotty" and now treat the affiliates much better because they need them now. He also said this need has increased the affiliate's work load, since the networks ask more of them.

A news director at one New York station said the change had not been positive. Although his station gets the northeast regional feed from CBS, he does not find it helpful. He says the affiliates in the eastern part of the country are not more useful to the networks. According to him, it is only the distant western state affiliates that have become more useful to the networks. In the east, closer to headquarters, network crews still fly in to cover events.

Table 4: Change in Network-Affiliate Relationship (N=10)

| Change | Number of Mentions (multiple) |
|---|---|
| • Network provides more material to station | 3 |
| • Station provides network with more | 7 |
| • More exchange between affiliates | 2 |
| • More conflicts because of independent SNG | 3 |

Value of SNV

When asked if their SNVs were (1) very valuable (2) valuable (3) not very valuable or (4) not valuable at all, seven out of ten said their trucks were very valuable. The remaining three respondents said their trucks were valuable.

Use of Satellite News Gathering Services

(See Table 5). All respondents were asked if their stations received one or more satellite news gathering networks or services. Fourteen out of 15 answered affirmatively. The only station not to receive any type of satellite news feed is the dual-affiliate in Glendive, MT - the smallest market in the country (ADI 213).

All 14 of these stations receive satellite news feeds from their broadcast networks. Two stations subscribed only to their network's satellite feed. A majority of them receive only one additional network. Some of them mentioned receiving and using free satellite feeds of a public relations nature. Only one station receives both Conus and CNN. They also receive ABC News 1 (ADI 57).

This survey shows that 42.8 percent of participating stations use Conus while 28.6 percent use CNN. The NAB survey results discussed on page 46 of this thesis showed 51.6 percent of its participants subscribing to Conus with 11 percent using CNN and FNN.

No one in this survey used Florida News Network or Central Florida Teleport even though 2 participants were from either Florida or Louisiana - states which are known for their use of satellites to cover emergency weather conditions. One respondent in this survey also specifically mentioned the Local Program Network.

Table 5: Use of Satellite News Gathering Services (N=14)

| Network/Service | Number of Mentions (multiple) | |
|---|---|---|
| • SKYCOM (NBC) | 4 | 28.5% |
| • Regional News Service (CBS) | 6 | 42.8% |
| • ABSAT (ABC) | 4 | 28.5% |
| • Conus | 6 | 42.8% |
| • CNN | 4 | 28.5% |
| • LPN | 1 | 7.5% |
| • TV Direct | 1 | 7.5% |
| • Newsfeed | 1 | 7.5% |
| • Washington News | 1 | 7.5% |
| • Satellite News Service (Sports) | 1 | 7.5% |
| • Media Link (Medical) | 1 | 7.5% |
| • Sun World | 1 | 7.5% |
| • Congressional Feeds | 1 | 7.5% |

Impact of SNG on Local Newscast Quality

(See Table 6). When asked if these services had improved the quality of their newscasts, 13 out of 14 who received satellite news feeds responded affirmatively. Most said they had more material from which to choose.

One respondent said satellite news feeds were used mainly for the late evening newscast rather than the 6 p.m. newscast which concentrates on local news. Three said they can pick material that is best tailored for their markets.

One news director said SNG services have not helped her station, and that she has seen no change in services in the five years she has worked at her station.

Table 6: Impact on Newscast Quality (N=14)

| Reasons | Number of Mentions (multiple) |
|---|---|
| • Ability to request stories | 2 |
| • Ability to go live | 1 |
| • More sources of information | 3 |
| • More stories to choose from | 8 |
| • More timely coverage | 4 |
| • More state/regional news | 1 |
| • More packages available | 2 |

Future Plans for SNG and SNV Use

Of the five non-SNV users, four received a broadcast network satellite news feed; three received either Conus or CNN, as well. They received no additional satellite news feeds.

When asked if they planned to obtain SNG capability or more capability within the next three years, three said no. All three said financial limitations were part of the reason. However, one said there was no real need for a SNV, that microwave served them well enough, since they were in a terrestrial relay network. Another said they were not interested in carrying more than local news. Another said there was no competitive reason to get either a Ku truck or to subscribe to more satellite news feeds. He also said CNN

was enough, that it had been a "major investment" for them (ADI 97).

Of the two stations that planned on obtaining more capability, one planned to purchase a truck (ADI 148) for geographical reasons. He said the Arkansas mountains made it difficult to cover the state properly and that he wanted to expand his coverage area.

The other station which planned to increase capability wanted to subscribe to an independent satellite news feed but had no idea which one. They were already receiving regional news service from CBS. The news director said they have no plans to buy a truck.

Impact of Local SNG on Broadcast Network Newscasts

(See Table 7). None of the 15 respondents believe their use of SNG will lead to the end of network newscasts. The primary reason is their belief that local stations are unable to cover national and international news as completely as the broadcast networks. They also believe network newscasters are better at analyzing news. However, most of them believe network newscasts will change, or already have changed because local newscasts have increased their scope.

One news director said network ratings will shrink as more people switch to local coverage, but he believes a "national news of record" will remain useful. He says local stations are only interested in covering national stories with a local perspective. Therefore, national and international news still needs the broader scope of a network newscast. He also said network news divisions are spending an increasing amount of time and money on news magazine formats that bring in more profits.

Another news director said his station was "proud to be affiliated with the network" and that he would hate to see network newscasts go.

One news operations manager said if the broadcast

networks are replaced it will take someone "like Conus" to do it. The local stations alone do not have the power.

Table 7: Impact of Local SNG on Network Newscasts (N=15)

| Reason | Number of mentions (multiple) |
|---|---|
| • Networks have more staff, time, money and connections | 3 |
| • Networks better at analysis | 4 |
| • Networks do not cover local angles | 2 |
| • Locals can not cover national angles as well as networks | 9 |
| • Locals can not cover international stories as well as networks | 6 |
| • Locals are not interested in covering national, international news | 3 |
| • Nation needs central news hub | 3 |

## Conclusions

The survey contained within this chapter has shown these stations use SNVs primarily to increase access to local and regional news. Trucks are used for breaking news as well as sports, weather, and feature stories. Generally, the same types of stories would be covered with ENG. SNG means they can cover them "better." It has increased the distance stations can travel for coverage and it has made the ability to transmit a story much more immediate.

Most respondents believe use of SNVs by local stations has made the networks more responsive to affiliate needs since many affiliates now provide news materials.

Ninety-three percent receive news feeds from their broadcast networks. Sixty-seven per cent receive one additional, independent network. Ninety-three per cent said these feeds improved the quality of their newscasts. Most expressed positive feelings about the use of SNG technology.

## REFERENCES

### Chapter IV


1. "The Satellite News Gathers," Broadcasting, 7-20-87, p. 73.

2. Wimmer, Roger, and Dominick, Joseph, Mass Media Research: An Introduction, Wadsworth Publishing Co., 1983, p. 61 & Appendix 1, p. 363.

3. Broadcasting/Cablecasting Yearbook, Broadcasting Publications, Inc., 1988, pp. C90-93.

4. Ibid., pp. C140-145.

# CHAPTER V

## CONCLUSION

This thesis takes an in-depth look at past and present use of satellite news gathering technology. It examines the possible direction such use might take in the future, along with the possible consequences of that use at both the local station and broadcast network levels. Chapter One begins with a discussion of the technology behind SNG, i.e., the launch and operation of communication satellites, and continues with a discussion of the technology of satellite news gathering vehicles, including costs. Chapter Two deals with the use and impact of SNG at the local level and includes descriptive references to many of the independent satellite news gathering organizations in operation today. It also discusses additional problems use of SNG has created for broadcast journalism in general. The next chapter presents issues that have developed at the network level. It discusses network incorporation of SNG into affiliate services and how the three major broadcast networks have evolved and will evolve in order to meet new demands and pressures.

The first three chapters of this thesis were written from material gathered during a review of available literature including magazines, journals, newspapers, and text books. Primary source material was also used, as time restraints allowed. Chapter Four was constructed entirely from information obtained by speaking directly with news management personnel at 15 television stations around the country. Answers to specific questions, along with other relevant information, will be found exclusively in this chapter. The following is a summary of information found

within this thesis.

## Summary

Routine access to the launch of communication satellites is once again possible with the development of new satellite launching facilities in places such as China and Japan, and with the creation of private launching facilities within the United States. These new services, in addition to those provided by the Soviet Union, the Europeans, and the U.S. government, assure satellite users that the basic technology of satellite news gathering will be available.

Many of the new satellites scheduled to go up are C-band/Ku-band hybrids. C-band birds are the most widely used today because of their reliability. However, these satellites share use of the electromagnetic spectrum with terrestrial microwave users, resulting in competition for access and the potential for technical interference. Ku-band satellites use a higher portion of the spectrum and are more powerful. This means smaller, more mobile receiving dishes can be used. Ku-band radiowaves can also be subject to rain fade, making them less reliable. C-/Ku-band hybrids allow interaction and exchange between users in both bands.

Stations utilize satellites by relaying messages through their transponders. Transponder time can be obtained through independent satellite networks, broadcast networks, or directly from the satellite operator. Major U.S. satellite operators include RCA Americom and Western Union (two of the first domestic carriers to begin operation in 1974), Hughes Communications, GTE Spacenet, AT&T, and Comsat.

Satellite news gathering vehicles, which use mobile Ku-band dishes, were introduced in 1984 by Stanley Hubbard of Conus Communications. Today, there are approximately 130 SNVs on the road. The average cost per truck is between $300,000 and $427,000. SNVs are used for breaking and feature stories. They are also commonly used for weather, sports, and special

events.

One of the biggest advantages of using a SNV is that it allows the reporter to stay at the news event, broadcasting live from the scene or sending completed packages quickly back to the station. Use of a SNV extends the station's news gathering reach far beyond its ADI and enhances its identity as an aggressive news station. This enhanced identity helps increase the station's profitability in the long run. Using a mobile uplink creates the desire and expectation by the audience of live coverage from distant places. Like ENG, SNVs may become the norm, at least in larger markets.

Stations base their decisions to purchase a SNV on a variety of factors including competitiveness and rivalry, desired image, news philosophy, geography, need for independence, and financial position. The biggest reasons for purchasing a truck are the ability to expand a station's coverage area and the ability to go live.

Live coverage presents special problems. The mere presence of the SNG crew may affect the news event, causing people to act differently than they would without television coverage. This is especially true of some political groups. The reporter may also intrude on people's privacy in traumatic situations. These behaviors exist with ENG, as well. However, SNG compounds the problem since the number of events which are covered live is increased. SNV reporters also have little time to gain background or perspective on a story since they often broadcast from the event soon after they arrive. The ability to remain at the event, airing story updates and details may defuse this problem.

Live-on-tape coverage is also popular with both SNG and ENG. Here, the reporter prepares a news package for airing at a more convenient time. Live and live-on-tape presentations often emphasize only the visual content of a story, ignoring abstract facts which can be vital for true understanding. The addition of file tape and/or graphics may also distract viewers from grasping important concepts. Such reports may be

entertaining but do not provide real information. Use of SNVs, which allow stations to go farther and to get there faster, may compound the problem since more live and live-on-tape material is available. Reporters also have less time to think through the facts before reporting them.

Satellite news gathering has three interdependent levels: (1) SNVs for coverage by local stations, (2) news cooperatives for sharing local and regional coverage, often gathered with SNVs, and (3) regional, national, and international news feeds obtained from independent and broadcast SNG networks. Cooperatives and network feeds are used much more widely today than SNVs.

Some of the more noteworthy independent satellite networks are Conus, CNN, Newsfeed, FNN, INN, LPN, NIWS, and the newer Monitor World Review and TV Direct. These services provide a range of news from breaking stories to features. They provide regional, national, and international news to local stations. Many of them facilitate cooperatives for the exchange of news between members.

Independent satellite networks vary in organizational structure and the types of services they provide. Some are loosely formed ad-hoc groups that function only when a specific, regional need arises. Others furnish daily news feeds from around the world. Local stations choose the type of services they want and need, if any. They may become affiliated with one or more of these networks depending on their news philosophy and their desire to broaden news coverage.

In response to these independent satellite news services, the broadcast networks also expanded their satellite news feeds. Many affiliates find these services quite useful. The networks also organize and/or facilitate regional news feeds and cooperatives, providing transponder time and technical advice. In addition, they will partially reimburse affiliates for purchase of a SNV or fixed dish.

The networks made these changes largely to strengthen

their own positions. Each is given access to affiliate SNVs during major stories and each obtains local stories of regional and national interest for inclusion into the satellite feed. In addition, affiliates now have an added use for the broadcast networks. Finally, network popularity is enhance when individual station popularity is high.

Due to increased access to regional, national, and international news through the use of SNG, local stations have the potential to compete directly with network newscasts, since they can deliver the same stories complete with video.

Network executives recognize this danger and are reorganizing. They plan to offer more analysis and in-depth coverage of national and international events. They intend to use their resources and well-polished expertise to do what the local stations cannot do ... deliver the national perspective. They will create a new niche for themselves, saving the network newscast from extinction.

## Discussion

Many of the findings in this paper might be anticipated with a bit of extrapolation regarding the development of other technically-related industries. Changes are inevitable if growth is to occur, especially within industries that rely on technology to perform their basic functions. For example, the telephone industry has made sweeping changes in response to advancements in communication technology. And, the television industry as a whole is in the midst of change based primarily on the growth of competing technologies. Because of increased technical capability, changes in organizational and power structures must be expected. Those people knowledgeable in the ways of broadcast journalism probably recognized growth in local capability and independence would take place. However, developments often occur quickly, making it difficult for both novice and

expert to keep abreast of all the issues. This constant growth makes it a bit difficult to study SNG and was one of the reasons Broadcasting magazine was used so extensively for purposes of this paper. It provided the most current information available regarding the increasing use of satellite technology for news gathering. Future studies might do well to increase the number of primary sources since first-hand information is usually best. This means additional time will be required in order to become familiar with the type of information that needs to be requested. In addition, one must also wait for organizations to respond to requests for information. Delays in response time might be avoided through telephone contact. However, financial considerations could be prohibitive.

The telephone survey done for this paper was most beneficial for understanding and confirmation once the literature review was completed. Without the literature review, appropriate questions for the survey would not have been apparent. Without direct contact, first-hand knowledge would have been impossible. Several surprising overall responses came as a result of the telephone survey. Network regional and national services are more widely used and valued than expected. Conversely, independent satellite news gathering organizations are less used and valued meaning their future may not be as bright as originally thought. In addition, the network-affiliate relationship seems to have changed in positive rather than negative ways due to increased affiliate capability. More of a give-and-take relationship has developed since many affiliates now contribute to network news feeds as well as receive them. Many of the news personnel contacted also felt a strong bond with the networks and had no desire to see an end to the network newscast.

This thesis also briefly discussed news cooperatives and how they contribute to local coverage of distant events with strong local interest. Students wishing to examine SNG topics

might consider doing research in this area. Very little existing information was found describing how these arrangements are organized within independent and network organizations. Such information is vital to an in-depth understanding of the use of SNG at the local level.

# APPENDICES

APPENDIX A

Satellite News Gathering Survey

Summer, 1988

Station _____ Position and name _____

Location _____ _____

1. Do you have a fixed satellite dish?
   ____ (1) No **(go to Q2)**
   ____ (2) Yes - What kind?
   ___ a. C-band ___ c. Ku- hybrid
   ___ b. Ku-band ___ d. both C- and Ku-

2. Do you receive news from one or more satellite newsgathering networks?
   ____ (1) No **(go to Q4)**
   ____ (2) Yes - Which one(s)?
   ___ a. Conus
   ___ b. SKYCOM (NBC)
   ___ c. Regional News Service (CBS)
   ___ d. ABSAT (ABC)
   ___ e. Florida News Network
   ___ f. CNN
   ___ g. Newsfeed Network
   ___ h. Central Florida Teleport (MC Ku)
   ___ i. News Express
   ___ j. Other_____

3. Do you think these services have improved the quality of your newscast?
   ____ (1) No
   ____ (2) Yes - Why?
   ___ a. More completed stories available
   ___ b. More video/audio available to write stories
   ___ c. More regional news
   ___ d. More national news
   ___ e. More international news
   ___ f. More story angles to choose from
   ___ g. Other_____

4. Do you use (own or lease) a satellite newsgathering vehicle?
   ____ (1) No **(go to Q 12)**
   ____ (2) Yes **(go to Q 5)**

5. Why did you choose to use a SNV?
   ___ 1. Ability to expand coverage area
   ___ 2. Greater ability to cover news live
   ___ 3. Current or future competitiveness
   ___ 4. Technical state-of-art
   ___ 5. Ability to provide feeds to other stations
   ___ 6. Business reasons (cost savings; promotion; equipment replacement)
   ___ 7. Geography makes ENG difficult
   ___ 8. Other_____

6. Do you see your SNV as:
   ___ 1. Very valuable
   ___ 2. Valuable
   ___ 3. Not very valuable
   ___ 4. Not valuable at all

7. What types of news stories are covered with your SNV?
   ___ 1. Breaking stories
   ___ 2. Emergencies/disasters
   ___ 3. Emergency weather conditions
   ___ 4. Special events
   ___ 5. Sporting events
   ___ 6. Local public affairs
   ___ 7. News documentaries
   ___ 8. Entertainment
   ___ 9. Other_____

8. Which type of stories do you cover now that you would not be able to cover without your SNV?
   ___ 1. Breaking stories
   ___ 2. Emergencies/disasters
   ___ 3. Emergency weather conditions
   ___ 4. Special events
   ___ 5. Sporting events
   ___ 6. Local public affairs
   ___ 7. News documentaries
   ___ 8. Entertainment
   ___ 9. Other_____

9. Which type of event is covered most often with your SNV?

___ 1. Breaking stories
___ 2. Emergencies/disasters
___ 3. Emergency weather conditions
___ 4. Special events
___ 5. Sporting events
___ 6. Local public affairs
___ 7. News documentaries
___ 8. Entertainment
___ 9. Other_____

10. Is your station affiliated with one of the 3 major networks?

___ (1) No **(go to Q 18)**
___ (2) Yes **(go to Q 11)**

11. Do you feel the relationship between your station and its affiliate has changed because of SNG?

___ (1) No
___ (2) Yes - Why?
___ a. Use network offerings less because of own ability to cover news
___ b. Use network offerings less because independent news services are used more often
___ c. Network feels threatened
___ d. Other_____

**Go to Q 18**

12. Do you plan on obtaining (more) SNG capability within the next 3 years?

___ (1) No **(go to Q 18)**
___ (2) Yes **(go to Q 13)**

13. What kind?

___ a. SNV
___ b. Fixed Uplink
___ c. SNG services from major network
___ d. SNG services from independent network

**If the answer to Q 13 included (d), go on to Q 14.**
**If not, go to Q 16.**

14. Which satellite news service(s) do you plan to choose?

___ a. Conus
___ b. SKYCOM (NBC)
___ c. Regional News Service (CBS)
___ d. ABSAT (ABC)
___ e. Florida News Network
___ f. CNN
___ g. Newsfeed Network
___ h. Central Florida Teleport (MC Ku)
___ i. News Express
___ j. Other_____

15. Why?

___ a. Heard it was good
___ b. Nearby stations use its competitor(s)
___ c. Want to belong to its news cooperative
___ d. Other_____

**If the answer to Q 13 included (a), go to Q 16**
**If not, go to 17**

16. Why do you plan to use SNV in the future?

___ 1. Ability to expand coverage area
___ 2. Greater ability to cover news live
___ 3. Current or future competitiveness
___ 4. Technical state-of-art
___ 5. Ability to provide feeds to other stations
___ 6. Business reasons (cost savings; promotion; equipment replacement)
___ 7. Geography makes ENG difficult
___ 8. Other_____

17. Is your station affiliated with one of the 3 major networks?

___ (1) No
___ (2) Yes

18. Do you think use of SNG will eventually lead to the end of network news, as it is now?

___ (1) No
___ (2) Yes

## APPENDIX B

### List of SNV Operators

| | ADI | Call Letters | Location | Contact, Title |
|---|---|---|---|---|
| 1. | 13 | WCCO-TV | Minneapolis, MN | Jerry Miller, Assignment Editor |
| 2. | 13 | KSTP-TV | Minneapolis, MN | Gary Hill, Managing Editor |
| 3. | 17 | WTAE-TV | Pittsburgh, PA | Steve Samuels, News Producer |
| 4. | 21 | KTSP-TV | Phoenix, AR | Doug Drew, Assistant News Director |
| 5. | 32 | WSMV-TV | Nashville, TN | Greg Zoerb, News Manager |
| 6. | 57 | WKJS-TV | Jacksonville, FL | Steve Patrick, Assistant News Manager |
| 7. | 91 | WBRZ-TV | Baton-Rouge, LA | David Kors, Operations Manager-News |
| 8. | 94 | KVBC-TV | Las Vegas, NV | Mike Cutler, News Director |
| 9. | 132 | WBNG-TV | Binghamton, NY | Cary Donovan, News Director |
| 10. | 142 | KSNT-TV | Topeka, KS | Doug Rutherford, News Director |

List Of Non-SNV Operators

| | | | | |
|---|---|---|---|---|
| 0 | 1. 97 | KKTV-TV | Colorado Springs,CO | Jim Nagy, Assignment Director |
| | 2. 148 | KPOM-TV | Fort Smith, AK | Bill Powers, Assignment Editor and Producer |
| | 3. 194 | KBIM-TV | Roswell, NM | Dave Gonzalez, News Director |
| | 4.212/13 | KXGN-TV | Glendive, MT | Terry Kegley, News Director |
| | 5. N/A | WIFR | Freeport, IL | Arles Hendershott, News Director |

# BIBLIOGRAPHY

BIBLIOGRAPHY


Aviation Week and Space Technology, 13 April 1987, p.29.

Benjamin, Burton. "Technology and the Bottom Line Create Profound Changes." The New York Times, 17 July 1986, from the Conus User Packet.

Bork, Robert. "Conus the Barbarian." Forbes, 4 November 1985.

Bradsher, Keith. "Broadcast Wheels." Los Angeles Times, 22 February 1988, sec. IV, p. 5.

Broadcasting, 8 June 1985, 8 July 1985, 23 September 1985, 16 December 1985; 17, 27 January 1986, 3 February 1986, 2 June 1986, 14 July 1986, 8 December 1986; 19 January 1987, 20 July 1987; 21 March 1988, 16, 23, 30 May 1988, 27 June 1988, 4 July 1988.

Broadcasting/Cablecasting Yearbook. Broadcasting Publications, Inc., 1988.

Broholm, John. "SNG Research." RTNDA Communicator, November 1985, p. 27.

Brokaw, Tom. "Viewpoints." Television and Radio Age, 15 September 1986, p. 95.

Christian Science Monitor. 27 July 1987, p. 1.

Conus Communications. Member Information Packet, 31 December 1987.

Dawson, Greg. "Out With The Old, In With The News." Orlando Sentinel, 13 March 1987, furnished by Conus Member Packet.

DeSonne, Marcia. Satellite News Gathering Survey: March 1987. Washington, D.C.: National Association of Broadcasters, 1987.

Foley, Teresa. "Reagan Bars Shuttle from Competing for New Satellite Launch Contracts." Aviation Week and Space Technology, 25 August 1986, p. 22.

_____. "NASA Planning Use of Expendables to Launch Science Spacecraft." Aviation Week and Space Technology, 23 June 1986, p. 18.

Fthenkis, Emanuel. Manuel of Satellite Communications. McGraw-Hill Book Co., 1984.

Gordon, Ed."Weeding Out the Toadstools." Television/Broadcast Communications, March 1985, p. 48.

Gunter, Barrie. Poor Reception - Misunderstanding and Forgetting Broadcast News. Lawrence Erlbaum Associates, 1987.

Head, Sydney, and Sterling, Christopher. Broadcasting in America. Houghton Miffin Co., 1987.

Jansky, Donald, and Jeruchim, Michael. Communication Satellites in the Geostationary Orbit. Artech House, Inc., 1983.

Josephson, Sanford. "Use of Alternative TV News Services Keeps Growing." Television and Radio Age, 28 October 1985, pp. 29-30; 82-84.

Lacy, Stephen; Atwater, Tony; and Powers, Angela."Use of Satellite Technology in Local Television News." Accepted for publication in Journalism Quarterly, 1988.

Lacy, Stephen; Atwater, Tony; Quin, Xinmin; and Powers, Angela. "Cost and Competition in the Adoption of Satellite News Gathering Technology." Journal of Media Economics, 1988, pp. 1, 51-2.

Livingston, Victor. "Satellite Industry Rethinks Marketing to Broadcast, Cable." Television/Radio Age, 3 March 1986, p. 56.

NBC Corporate Communications. December, 1987, p. 2.

Pritchard, Wilbur and Sciulli, Joseph. Satellite Communication Systems Engineering. Printice-Hall, Inc., 1986.

Randolph, Eleanor. "Network News Confronts Era of Limits." Washington Post, 2 February 1987, p. 1.

Shaffer, David. "By Van and Satellite, Local Newscasts are Going National." New York Times, 21 December 1986, p. 2, furnished by Conus Member Packet.

SMPTE Journal, March 1987, p. 274.

Standish, Kim, "Satellite News Gathering: The Next Round." RTNDA Communicator, September 1986, pp. 37-42.

Television/Radio Age. 3 March 1986, pp. 55, 68.

TV Technology, December 1987, p. 2.

Whitehouse, George. Understanding the New Technologies of Mass Media. Prentice-Hall, Inc., 1986.

Wimmer, Roger, and Dominick, Joseph. Mass Media Research: An Introduction. Wadsworth Publishing Co., 1983.

Yoakam, Richard, and Cremer, Charles. ENG: Television News and the New Technology. Southern Illinois University Press, 1985.

Zavistovich, Alex. "Spacenet III in Orbit." TV Technology, April 1988, p. 12.