



WGN Continental Broadcasting Company

INTER OFFICE MEMO

TO ALL WGN/WGN-TV ENGINEERS

FROM Charles Rothers

DATE April 27, 1979

Subject: Television Earth Station

Ladies and Gentlemen:

Wanting to keep you informed of our progress, I am writing to let you know that, in the near future, your company will be installing an earth station on its property just south and east of the J. Howard Wood Center.

The new earth station facility will be capable of receiving radio and television signals from any particular domestic satellite to which it is oriented. Mechanized antenna mounts will permit rapid orientation over the range of satellite transmission remotely from master control area. Frequency agile receivers will permit tuning any transponder frequency.

Telecommunication by satellite is growing rapidly. It is superior to terrestrial microwave in quality and reliability. Your company is making a substantial investment to be abreast of and be part of this new telecommunication technology and welcomes your questions, thoughts or suggestions.

The facility will operate with a 10-meter (32.8-foot) parabolic in the frequency range 3.7 to 4.2 GHz. Positioned approximately 22° above the horizon, it will normally be directed from 70° to 135° west longitude, depending upon which satellite it is pointed to.

As satellite technology develops, it is possible that frequencies in the higher bands will be available for uplinks at which time facilities such as we are installing could become bi-directional.

The contractor is Scientific-Atlanta, a leading equipment manufacturer. Enclosed is a copy of their informative brochure on the subject of satellites.

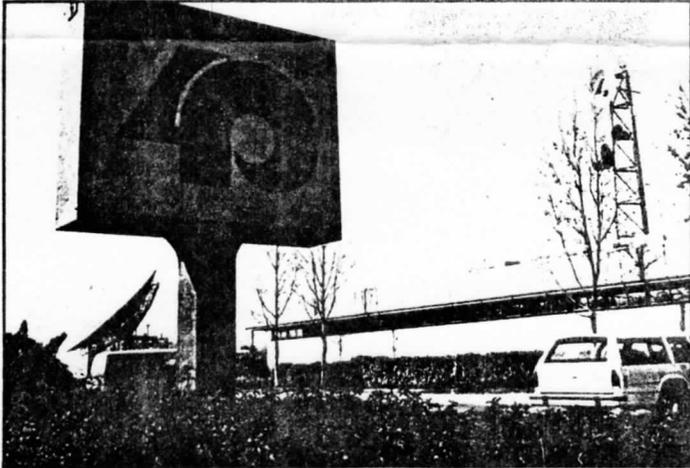
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Enclosure

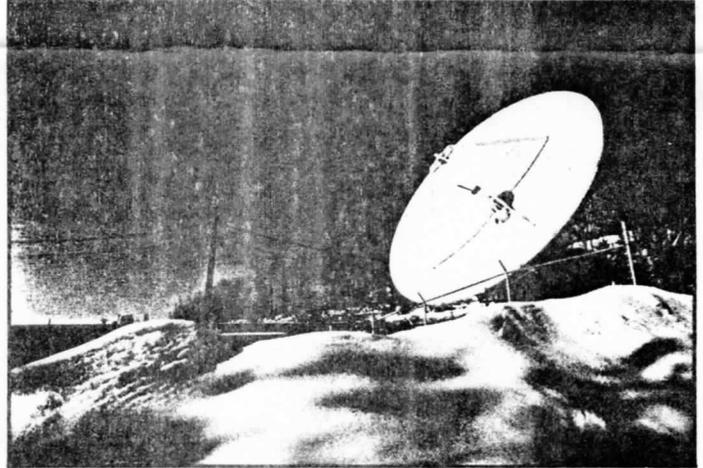
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Trigg and Lotzer

What's Happening in 1979 -

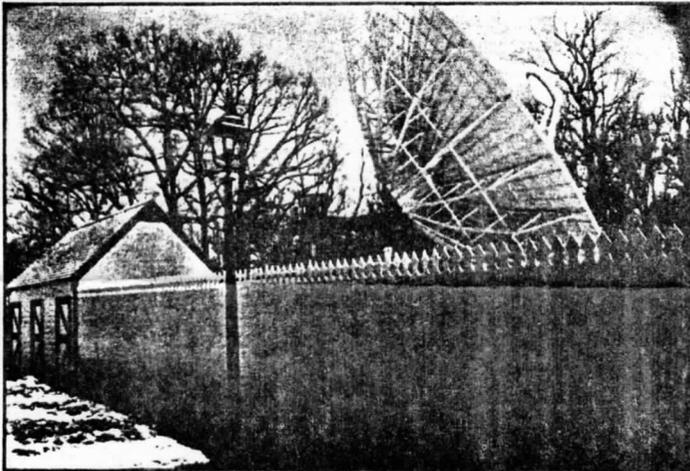
KTXL-TV Sacramento, California



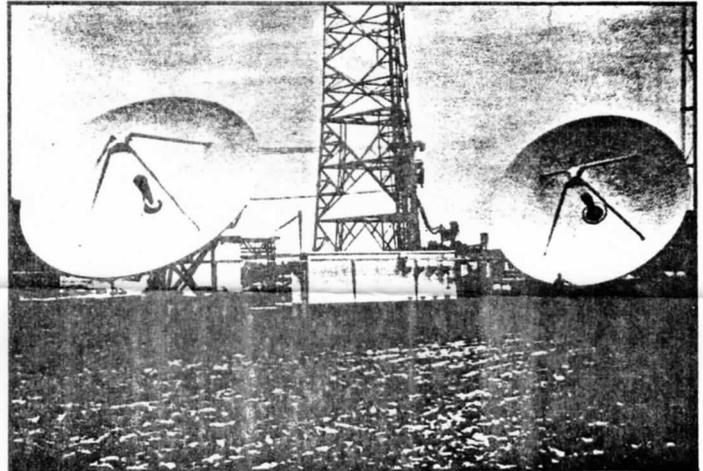
KBMA-TV Kansas City, Missouri



PTL Television Network Charlotte, North Carolina



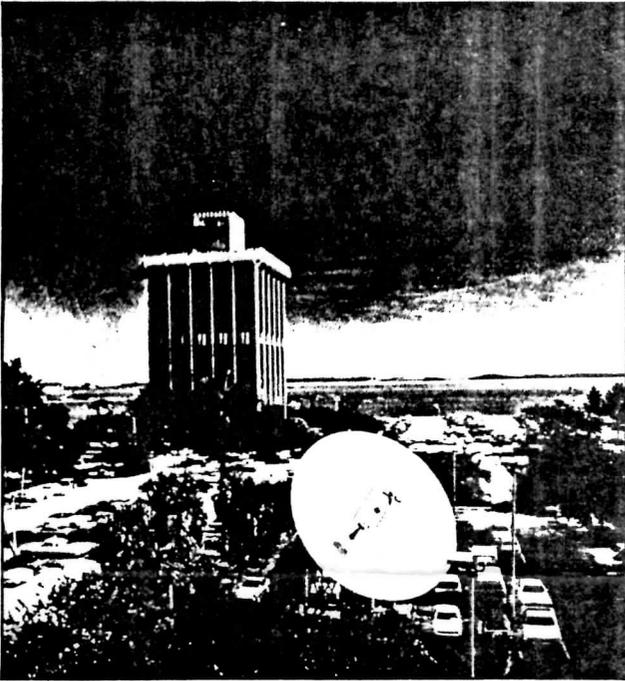
WIVB-TV Buffalo, New York



Satellite Earth Stations for Television Broadcasters

**Scientific
Atlanta**

Satellite Communications Products



WCIX-TV Miami, Florida

Every time you look up, more comes down. More programming of more types is becoming available via satellite almost every day — sports, syndicated shows and live events from around the world. More and more broadcasters in the United States are getting programming by satellite. And many other broadcasters, looking for increased programming flexibility, see a satellite earth station in their future.

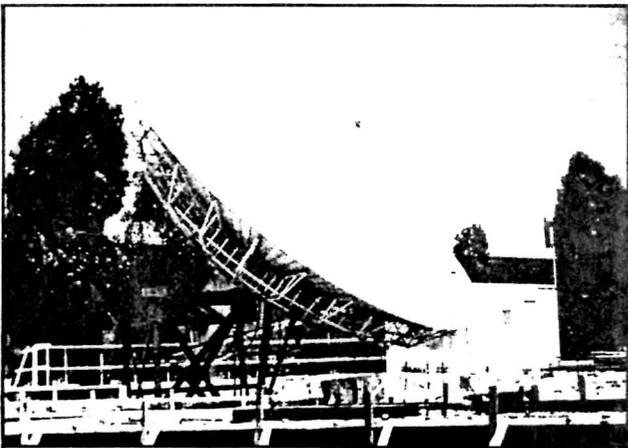
Scientific-Atlanta conducted a survey for the 1979 NAB to give you an overview of what's happening in satellites. We asked all commercial broadcasters and program suppliers now using satellites to pass along their experience to date. We hope that this summary of their replies will be helpful to you in considering the use of satellite-fed programming at your station.

What's
Happening
in 1979 =

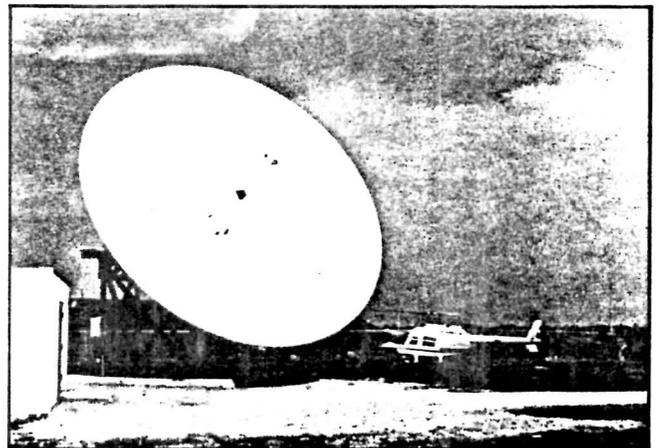
Broadcasters Tell the S

Responses from program suppliers and stations indicate a wide range of programming now distributed/received by satellite.

- Specialized Network Programming
Such as PBS, the Spanish International Network, and daily feeds to Hawaii and Alaska for ABC, CBS, and NBC television affiliates.
- Daily and Special News Feeds
Such as the services provided by ITNA, UPITN, and others.
- Professional and College Sports
Including major league baseball, boxing, NCAA conference sports, Notre Dame basketball, and many others.
- Daily Religious Programming
Including the Christian Broadcasting Network, PTL Television Network, Trinity Broadcasting Network, and other occasional religious programs.
- National and Regional Networks for Program Packagers/Distributors.
- Point-to-Point Feeds for Local Stations
Such as special sports and news feeds.



Trinity Broadcasting Network Santa Ana, California



WTOG-TV St. Petersburg, Florida

satellite Story

Advantages

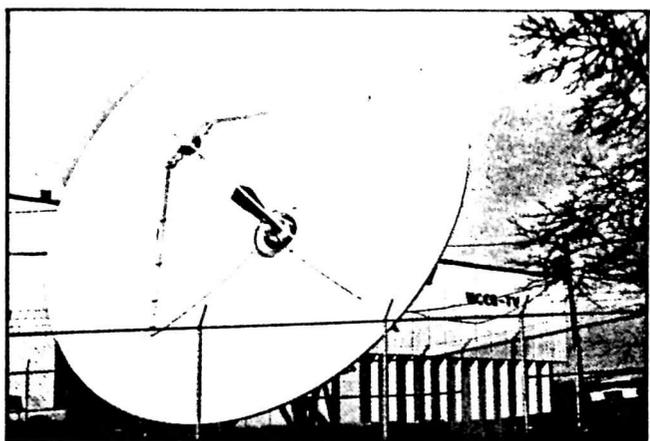
Enthusiastic replies from broadcasters and program suppliers alike cited these advantages of programming distributed via satellite:

- Broader Programming Opportunities are Available.
- Satellites are Convenient.
- Satellites are Less Expensive than Terrestrial Distribution Methods.
- Satellite Picture and Sound Quality is Superior.

Survey participants took special note of the easier access to time-value programming, such as sports and special news feeds, which affords them wider programming scope.

Many pointed out the ease of arranging ad hoc networks and distant signal pick-ups via satellite, and said that they had realized substantial business benefits from these capabilities.

Cost savings via satellite, it was reported, have allowed most broadcasters to amortize their earth station investment in three years or less. Satellites have also made programming available which could not be provided previously because of high distribution costs.



WCCB-TV Charlotte, North Carolina

One problem noted was the declining availability of satellite time during peak programming periods. However, this should soon be solved when both Western Union and RCA launch additional satellites in late 1979.

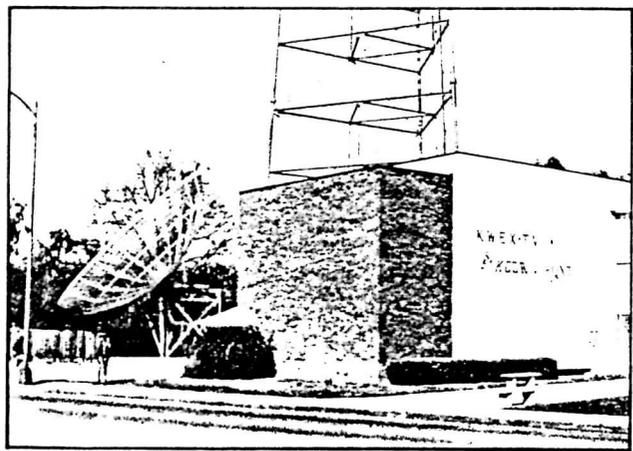
Future Programming

Additional programming that broadcasters hope to see made available by satellite in the future:

- Regularly Scheduled Entertainment Shows and Specials.
- More Nightly News.
- Additional Sports.
- More Spanish-Language Programming.

A number of respondents also expressed a desire for satellite uplinks in more markets for use in arranging news and sports feeds.

Scientific-Atlanta has installed the majority of earth stations now in service in the United States. These installations range from single channel, receive-only stations to complete transmit/receive, fully redundant, remotely controlled stations. We'd like to work with you to meet your future earth station requirements.



KWEX-TV San Antonio, Texas



Christian Broadcasting Network Virginia Beach, Virginia



Earth Stations Used by Broadcasters

March 25, 1979

The following earth stations are now being used by broadcasters on a regular basis for television programming distribution:

City	Earth Station Owner	Comment
Phoenix, Arizona	KPAZ-TV	Receive Station
Los Angeles, California	KMEX-TV	Tx/Rx Sin Network
Los Angeles, California	RCA	Tx/Rx Common Carrier
Los Angeles, California	Western Union	Tx/Rx Common Carrier
Santa Ana, California	Trinity Broadcasting (KLXA-TV)	Tx/Rx TBN Network
Sacramento, California	KTXL-TV	Receive Station
San Francisco, California	Western Union	Tx/Rx Common Carrier
San Francisco, California	RCA	Tx/Rx Common Carrier
Miami, Florida	WCIX-TV	Receive Station
Miami, Florida	WLTV	Receive Station
St. Petersburg, Florida	WTOG-TV	Receive Station
Atlanta, Georgia	WYAH-TV	Receive Station
Atlanta, Georgia	Southern Satellite Systems	Tx/Rx Common Carrier
Atlanta, Georgia	RCA	Tx/Rx Common Carrier
Atlanta, Georgia	Western Union	Tx/Rx Common Carrier
Honolulu, Hawaii	Satellink	Common Carrier Receive Station
Ft. Wayne, Indiana	WFFT-TV	Receive Station
Chicago, Illinois	Western Union	Tx/Rx Common Carrier
Chicago, Illinois	RCA	Tx/Rx Common Carrier
Boston, Massachusetts	WXNE-TV	Receive Station
Detroit, Michigan	Greater Media	Common Carrier Receive Station
Minneapolis, Minnesota	WTCN-TV	Receive Station
St. Louis, Missouri	KPLR-TV	Receive Station
Kansas City, Missouri	KBMA-TV	Receive Station
Charlotte, N.C.	WCCB-TV	Receive Station
Charlotte, N.C.	PTL Television Network	Tx/Rx PTL Network
New York, New York	RCA	Tx/Rx Common Carrier
New York, New York	Western Union	Tx/Rx Common Carrier
Buffalo, New York	Satellite Signals Unlimited (WIVB-TV)	Tx/Rx Common Carrier
Canton, Ohio	WJAN-TV	Receive Station
Dallas, Texas	KXTX-TV	Receive Station
Dallas, Texas	Western Union	Tx/Rx Common Carrier
Houston, Texas	RCA	Tx/Rx Common Carrier
San Antonio, Texas	KWEX-TV	Tx/Rx SIN Network
Virginia Beach, Virginia	Christian Broadcasting Network	Tx/Rx CBN Network
Seattle, Washington	Western TeleCommunications/ Western Union	Tx/Rx Common Carrier
Seattle, Washington	KSTW-TV	Receive Station
150 U.S. Locations	PBS Stations	PBS Network

The following stations will be installed by broadcasters within the next ninety days:

Tulare-Fresno, California	KMPH	Receive Station
Chicago, Illinois	WGN-TV	Receive Station
Portland, Oregon	KPTV	Receive Station
Philadelphia, Pennsylvania	WPHL-TV	Receive Station
Pittsburgh, Pennsylvania	WPCB-TV	Receive Station
Greenville, S.C.	WGGG-TV	Receive Station
Salt Lake City, Utah	KUTV	Receive Station
Salt Lake City, Utah	KSTU	Receive Station

Scientific Atlanta