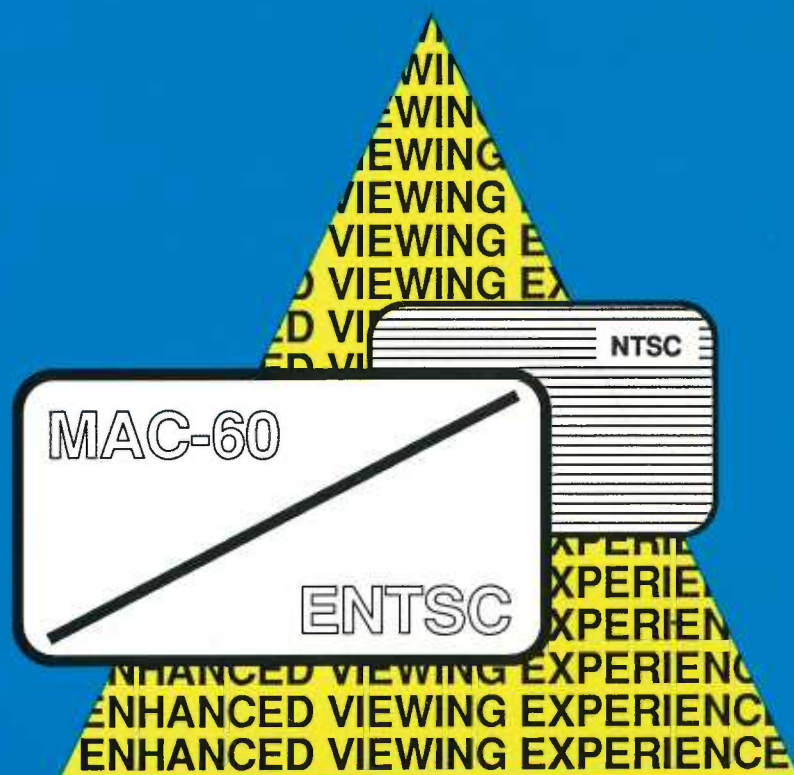


ENTSC DEMONSTRATION



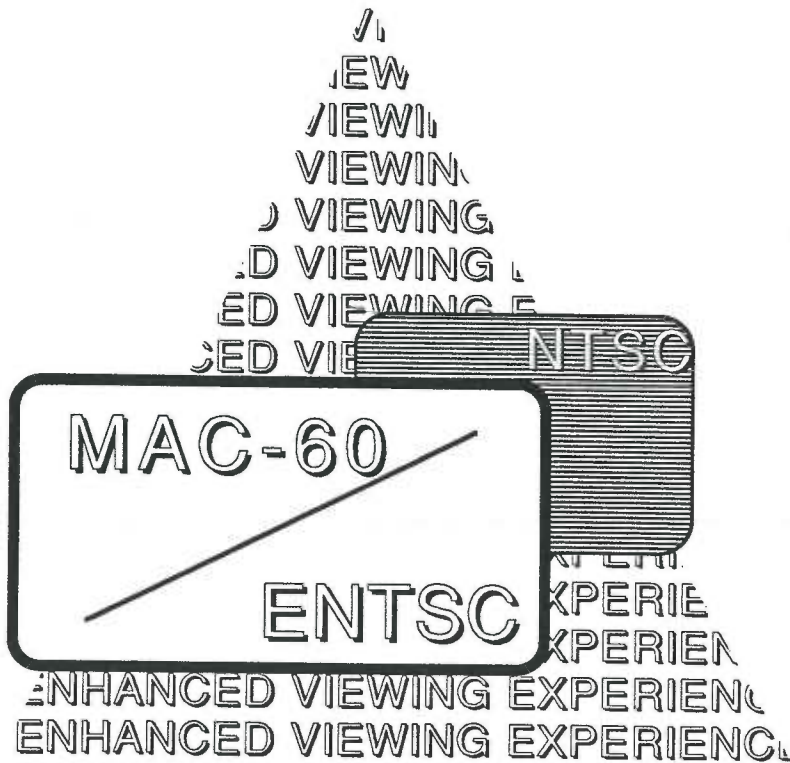
PHILIPS LABORATORIES - BRIARCLIFF
NORTH AMERICAN PHILIPS CORPORATION

ADVANCED

TELEVISION

SYSTEMS

CONCEPTS



NORTH AMERICAN PHILIPS CORPORATION

PHILIPS LABORATORIES, BRIARCLIFF MANOR, NEW YORK

MAC-60/ENTSC PRESENTATION AND ENTSC DEMONSTRATION

- * WELCOME TO PHILIPS LABORATORIES
- * MAC-60/ENTSC/NTSC CONCEPT
- * DESCRIPTION OF ENTSC DEMONSTRATION
- * COFFEE BREAK
- * ENTSC DEMONSTRATION
- * QUESTIONS AND ANSWERS
- * CONCLUSIONS

PRESENT STATUS

DEFINITION OF TERMS (USA)

1) INTSC (IMPROVED-NTSC)

- * SIGNAL POST-PROCESSING IN RECEIVER
- * FULL NTSC COMPATIBILITY

2) EDTV (ENHANCED DEFINITION TELEVISION)

- * 525-LINE SCANNING
- * ASPECT RATIO, TRANSMISSION FORMAT, SPECTRUM UTILIZATION MAY CHANGE RELATIVE TO NTSC

3) HDTV (HIGH DEFINITION TELEVISION)

- * INCREASED SPATIAL RESOLUTION
(>2 X THE NTSC RESOLUTION)

DEFINITION OF TERMS (JAPAN)

1) IDTV (IMPROVED DEFINITION TELEVISION)

- * SIGNAL POST-PROCESSING IN RECEIVER
- * FULL NTSC COMPATIBILITY

2) EDTV (ENHANCED DEFINITION TELEVISION)

- * SIGNAL PRE-PROCESSING AT SOURCE AND POST-PROCESSING IN RECEIVER
- * FULL NTSC COMPATIBILITY, BUT EXTRA VIDEO DETAIL, DATA AND SOUND INFORMATION ADDED TO THE CONVENTIONAL NTSC SIGNAL

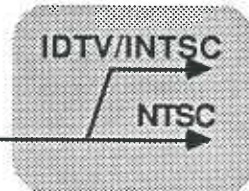
3) HDTV (HIGH DEFINITION TELEVISION)

- * INCREASED SPATIAL RESOLUTION
(>2 X THE NTSC RESOLUTION)
- * 1125/60/16:9/2:1
- * NOT COMPATIBLE WITH NTSC
- * TRANSMITTED AS MUSE (8.4MHZ BASEBAND)
- * PRIMARY CARRIERS: DBS, VCR, OPTICAL DISC

IDTV/INTSC

SOURCE
STUDIO,
CATV HEADEND

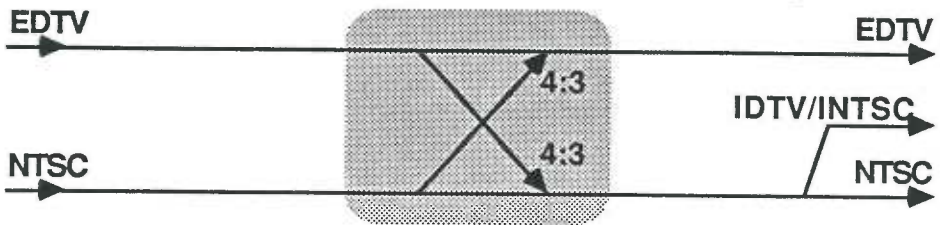
SINK
CONSUMER
PREMISES



EDTV

SOURCE
STUDIO,
CATV HEADEND

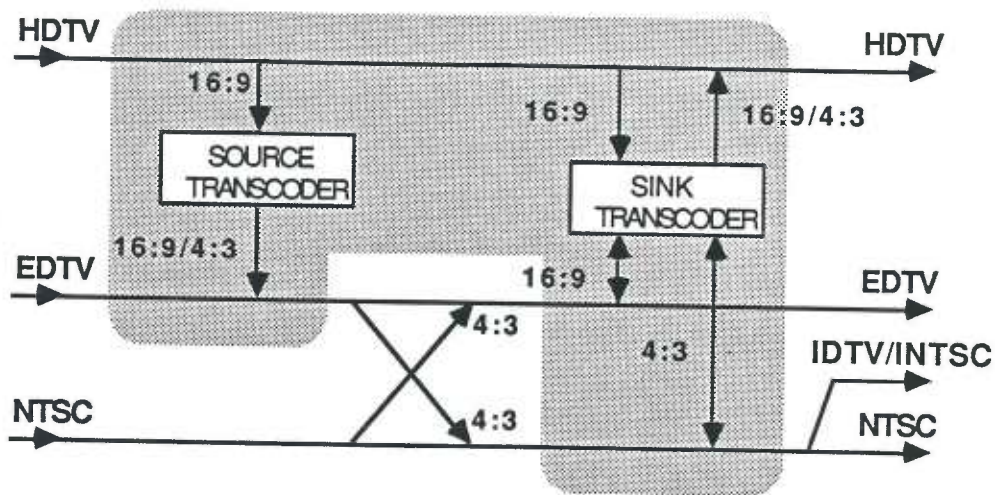
SINK
CONSUMER
PREMISES



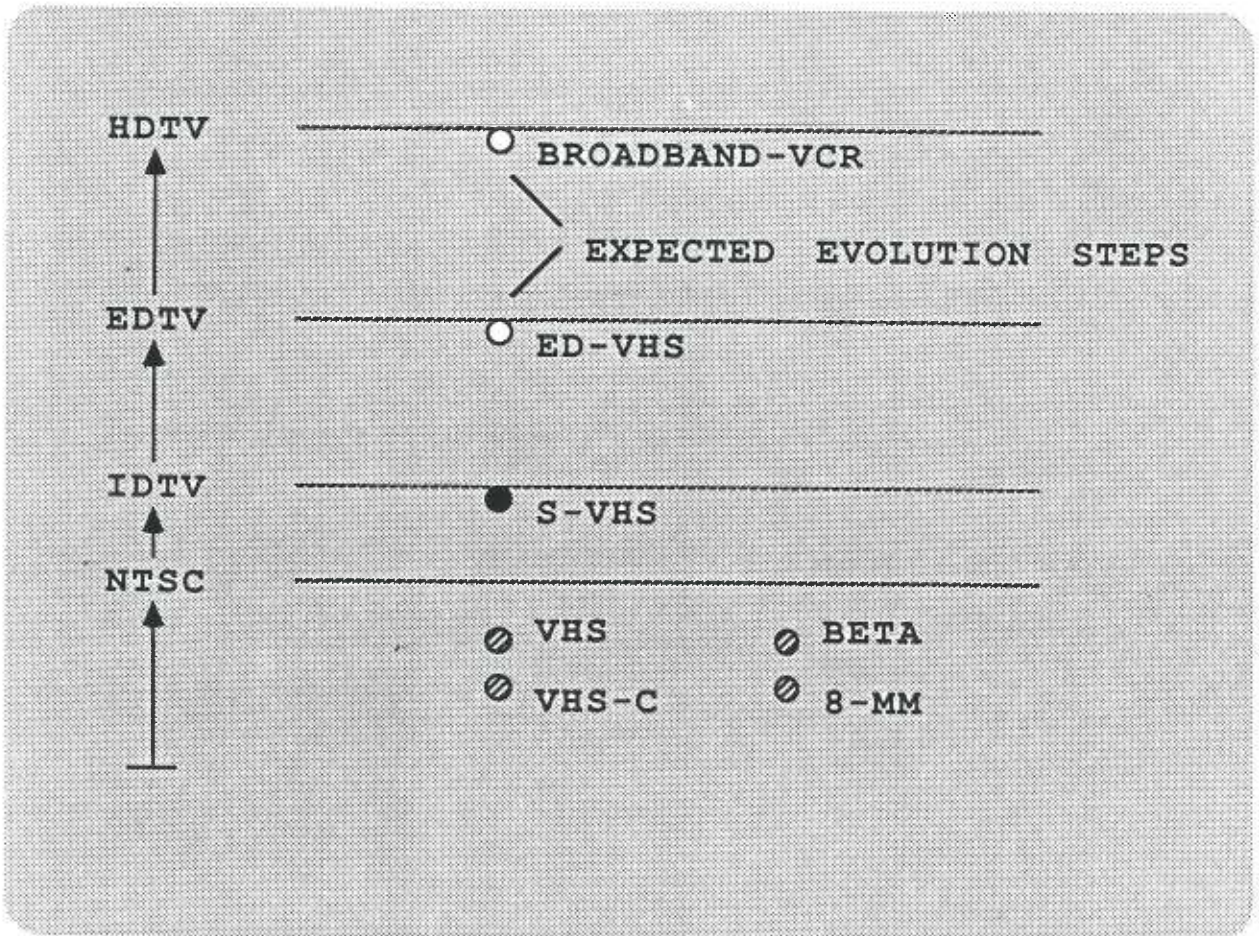
HDTV

SOURCE
STUDIO,
CATV HEADEND

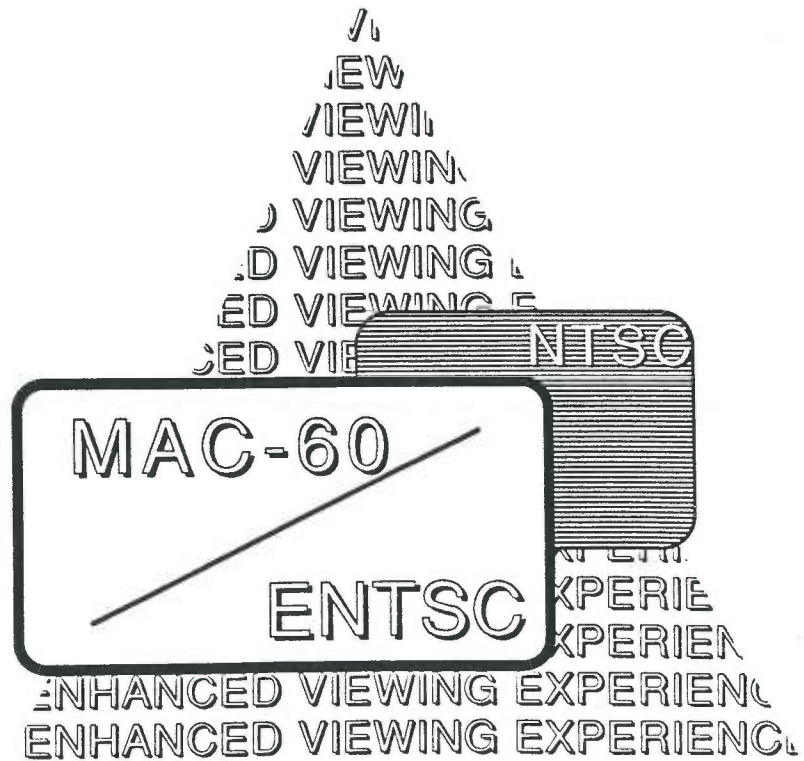
SINK
CONSUMER
PREMISES



VCR



PROPOSED HIERARCHICAL EVOLUTION STRUCTURE



DEFINITION OF TERMS-MAC-60
(NORTH AMERICAN PHILIPS)

- HIGH DEFINITION MULTIPLEXED ANALOG COMPONENT
(MAC) TELEVISION TRANSMISSION SYSTEM
- USING SINGLE SATELLITE TRANSPONDER
- "NTSC-FRIENDLY" EASILY TRANSCODABLE
SIGNAL TO:
 - * NTSC (END-USER REQUIREMENT)
 - * ENTSC (CATV HEADEND AND END-USER REQUIREMENT)
- PROVIDES COMMON NETWORK FEED TO ANY VIDEO
SERVICE

MAC-60 TRANSMISSION SIGNAL

*** PROVIDES**

- HDTV VIDEO
- MULTI-CHANNEL DIGITAL STEREO SOUND
- DIGITAL DATA AND CONTROL
- SECURE SIGNAL TRANSMISSION

*** CARRIES THE INFORMATION IN THE FORMAT OF**

- TIME DIVISION MULTIPLEXED LUMINANCE,
CHROMINANCE AND LINE DIFFERENTIAL VIDEO
SIGNAL

DEFINITION OF TERMS-ENTSC
(NORTH AMERICAN PHILIPS)

* **A TWO-CHANNEL WIDE ASPECT RATIO
NTSC-COMPATIBLE ENHANCED DEFINITION
TELEVISION SYSTEM**

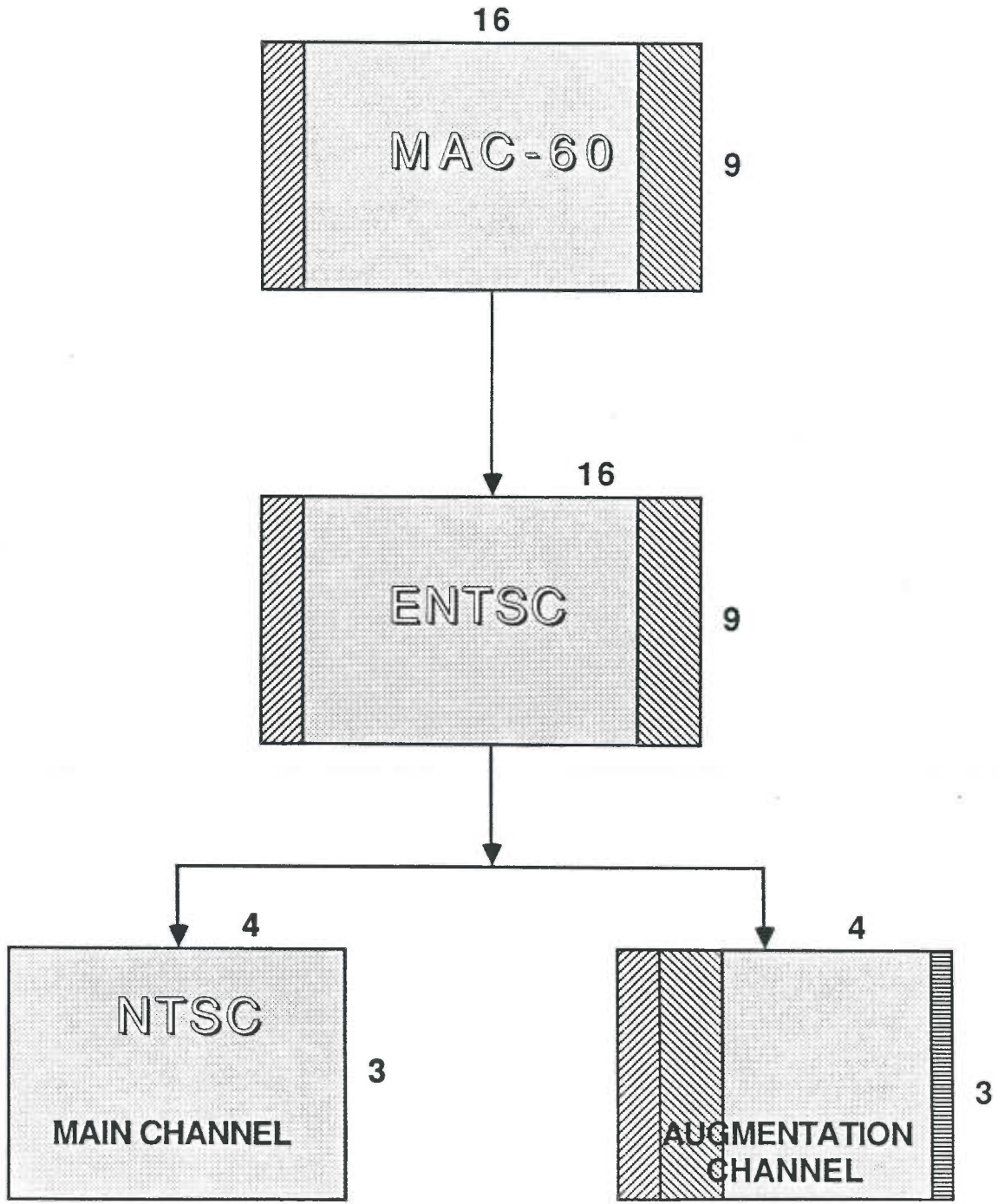
* **MAIN CHANNEL**

- 6 MHz
- FULLY COMPATIBLE WITH NTSC

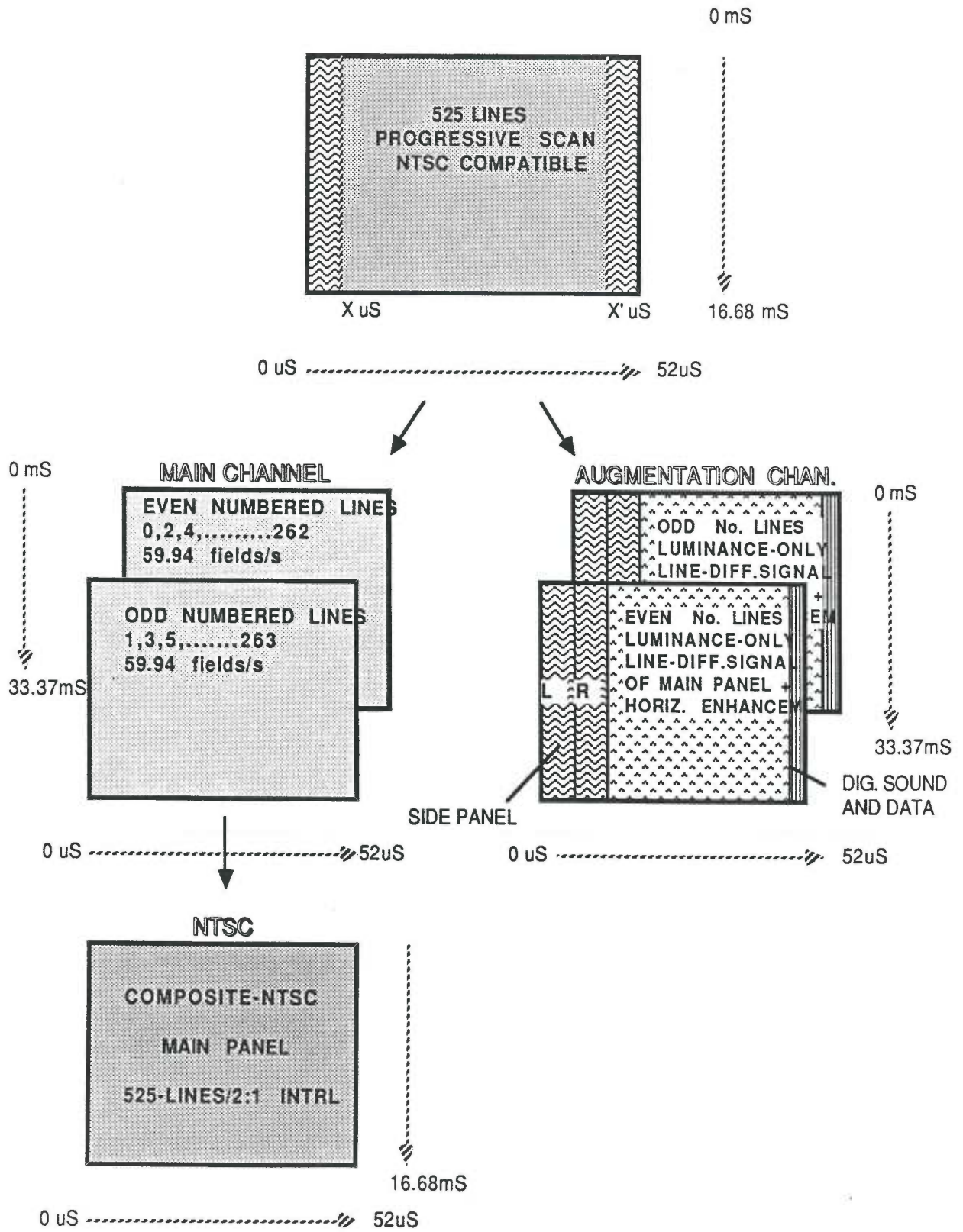
* **AUGMENTATION CHANNEL**

- 6 MHz
- EXTRA VIDEO INFORMATION FOR THE SIDE-PANELS
- DIGITAL DATA CHANNEL FOR STEREO AUDIO,
TELETEXT AND OTHER DATA TYPE MESSAGING

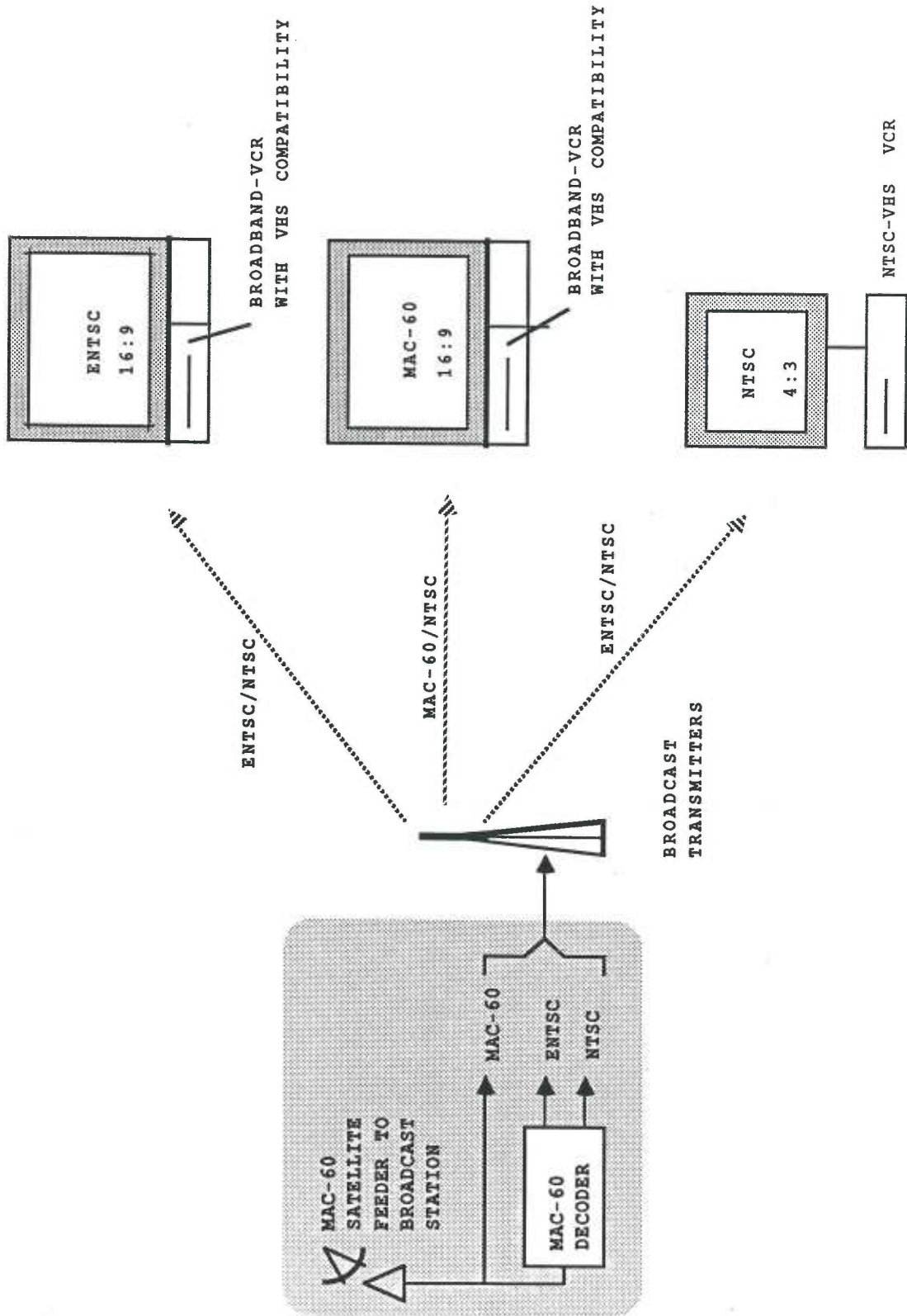
MAC-60/ENTSC/NTSC HIERARCHICAL
TELEVISION SYSTEM



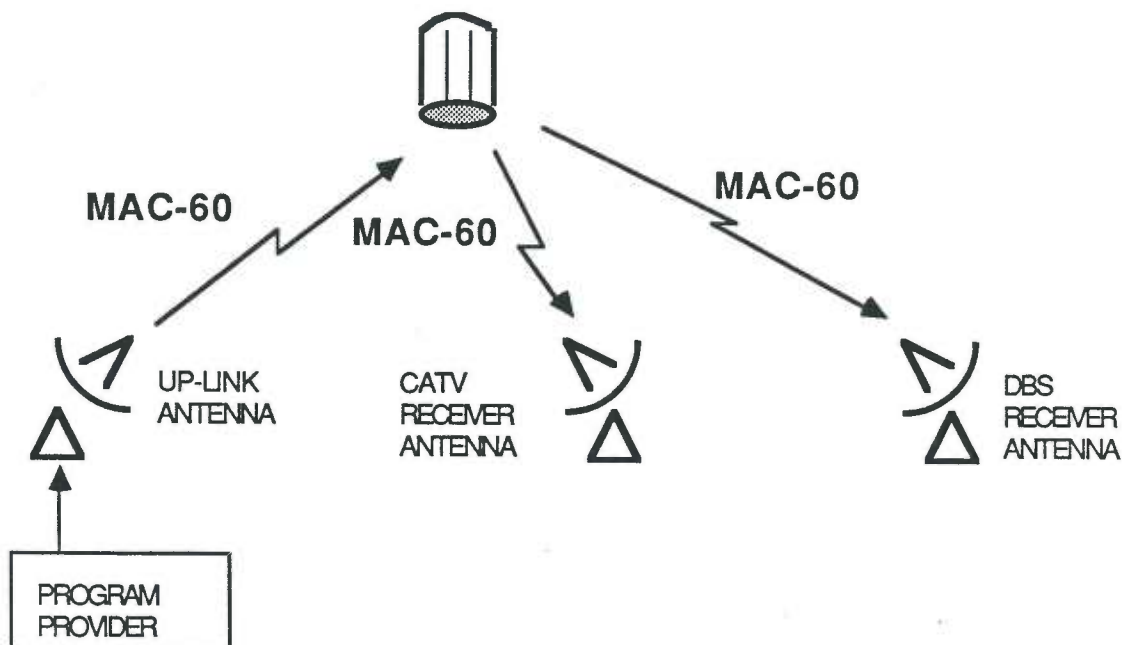
ENTSC



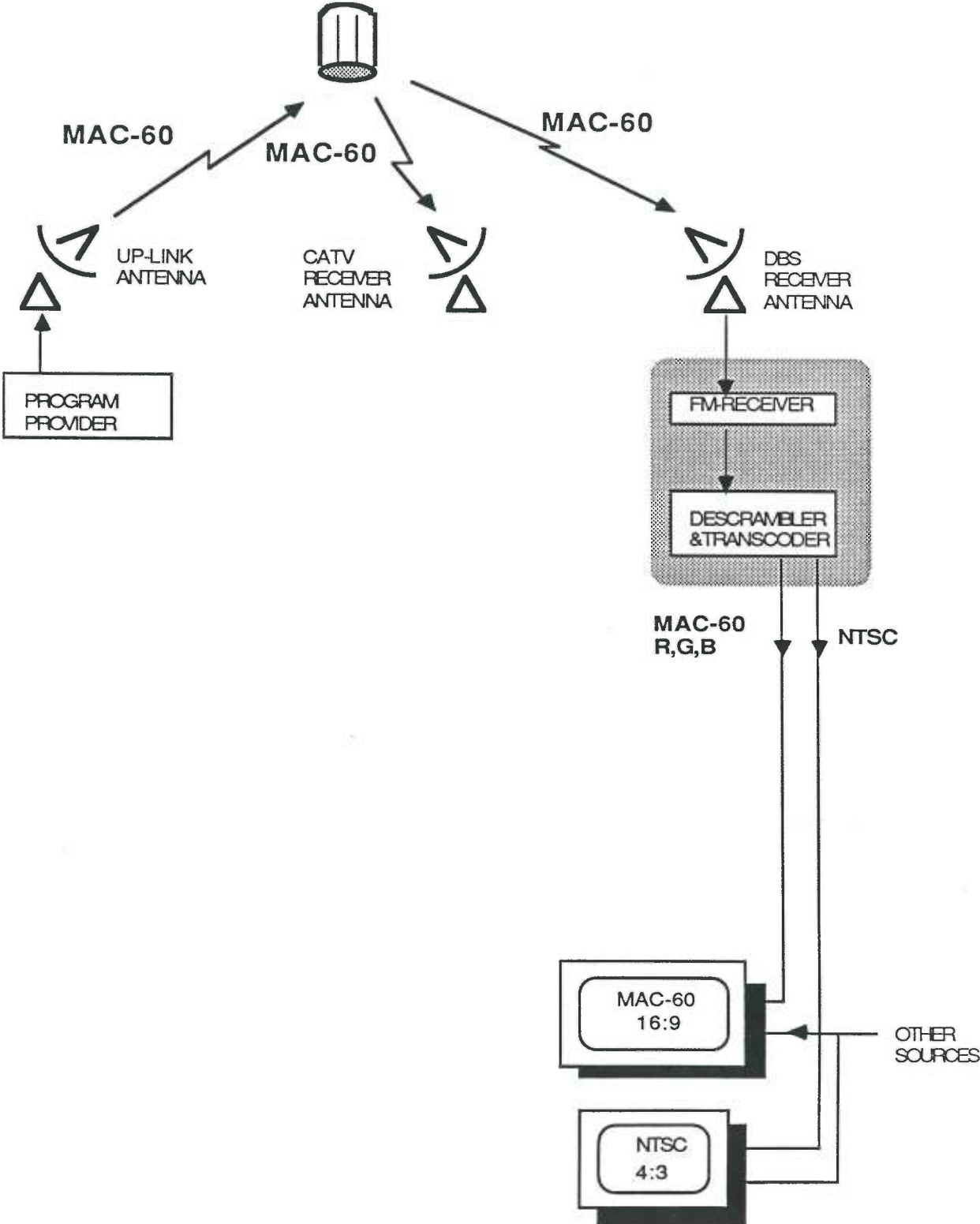
NTSC/ENTSC/MAC-60 TERRESTRIAL BROADCAST POSSIBILITIES



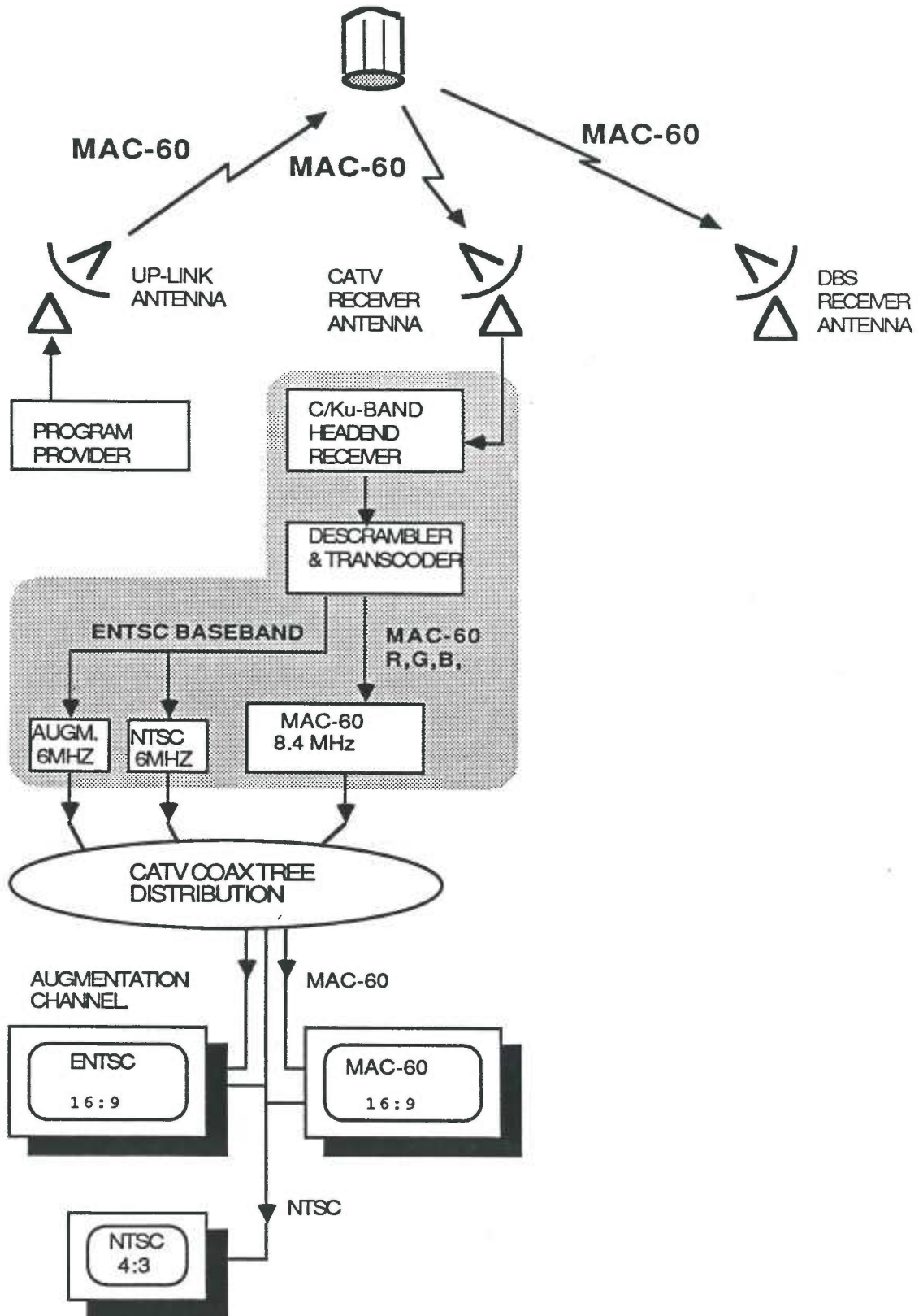
SATELLITE DISTRIBUTION OF ADVANCED TELEVISION SIGNAL



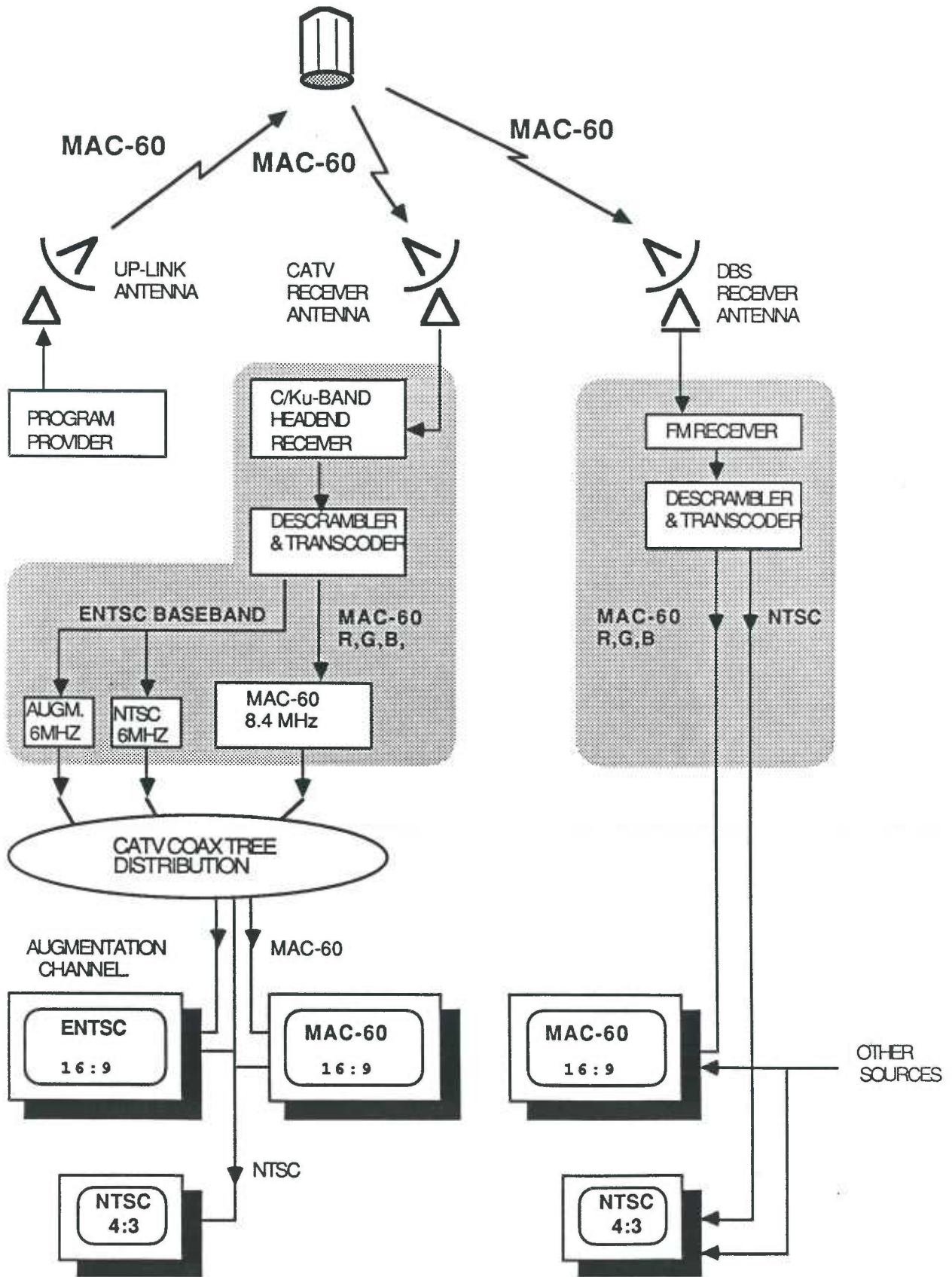
DIRECT BROADCAST SATELLITE



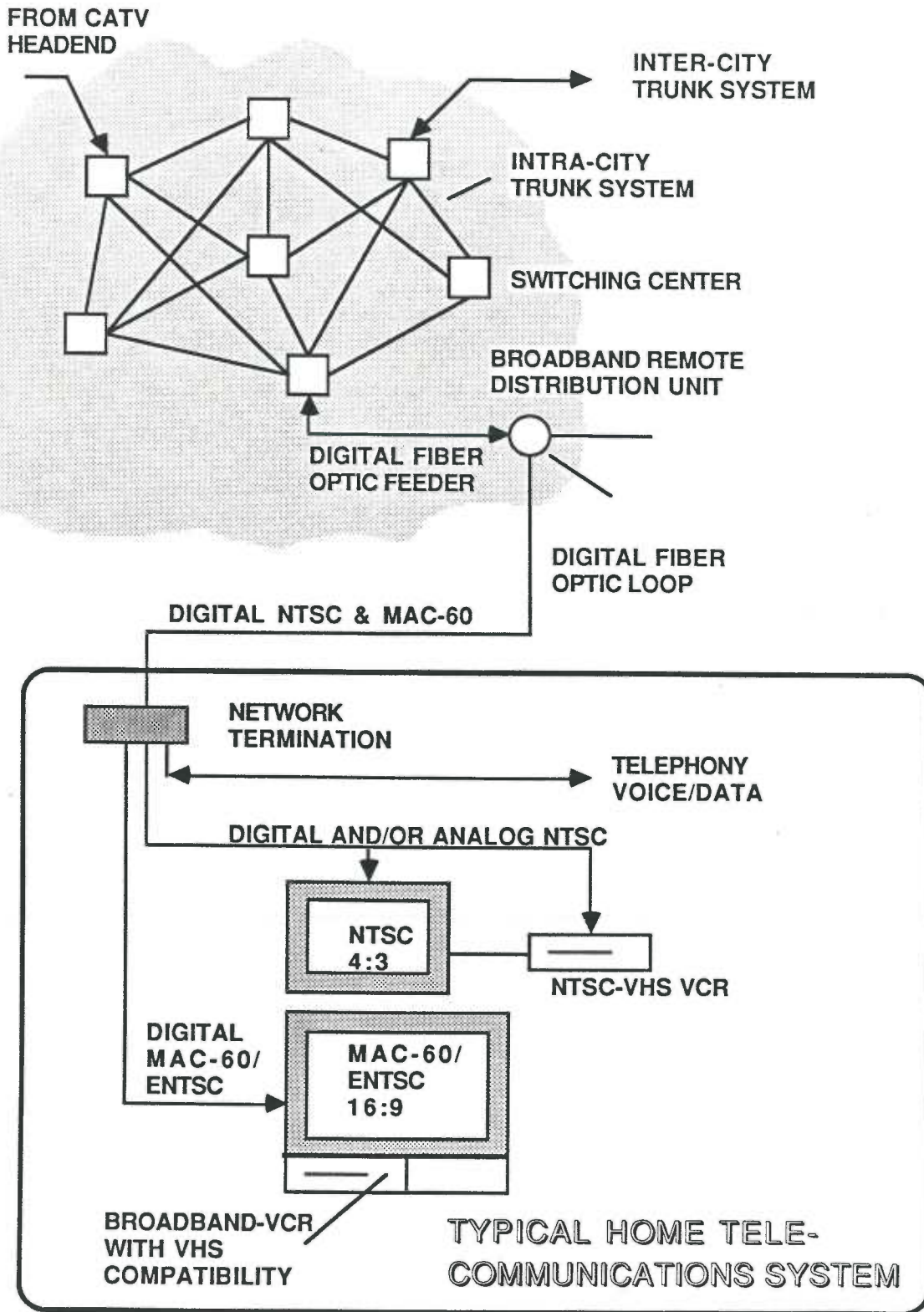
CATV DISTRIBUTION OF ADVANCED TELEVISION SIGNAL



NTSC/ENTSC/MAC-60 DISTRIBUTION



TELEPHONY NETWORK DISTRIBUTION OF ADVANCED TELEVISION SIGNAL



RECOMMENDED EVOLUTION IN THE USA

USA (60Hz)		1986-89	1990-94	1995-
TERRESTRIAL BROADCAST		NTSC/INTSC	- NTSC/INTSC - EDTV - ENTSC and/or - MAC-60	- NTSC/INTSC - EDTV - ENTSC and/or - MAC-60
CATV		NTSC/INTSC	- NTSC/INTSC - EDTV - ENTSC and/or - MAC-60	- NTSC/INTSC - EDTV - ENTSC and/or - MAC-60
SATELL.	FSS	B-NTSC	- MAC-60	- MAC-60
	BSS	X	- MAC-60	- MAC-60
TELEPHONY NETWORK		X	X	- DIG.NTSC - DIG.MAC-60
VCR		NTSC-VHS/S-VHS	- NTSC-VHS/S-VHS - BROADBAND-VCR WITH VHS & ENTSC/MAC-60 COMPATIBILITY	- NTSC-VHS/S-VHS - BROADBAND-VCR WITH VHS & ENTSC/MAC-60 COMPATIBILITY - DIGITAL NTSC, ENTSC, MAC-60
OPTICAL DISC		-NTSC/INTSC -EDTV	- NTSC/INTSC - ENTSC/MAC-60	- NTSC/INTSC - ENTSC/MAC-60

CONCLUSION

- * TOTAL SYSTEMS APPROACH
- * HIERARCHICAL COMPATIBLE EVOLUTION
- * "NTSC-FRIENDLY" HDTV (MAC-60) WITH POTENTIAL NETWORK FEED CAPABILITY TO ALL VIDEO APPLICATIONS
- * FULLY COMPATIBLE EDTV (ENTSC)

ENTSC DEMONSTRATION SYSTEM

MAC-60/ENTSC PRESENTATION AND DEMONSTRATION OBJECTIVES

- * SHARE OUR PROGRESS REPORT RESULTS
- * INITIATE INDUSTRY DISCUSSIONS ON
COMPATIBLE SOLUTIONS OF ADVANCED
TELEVISION
- * ARRIVE TO A SUCCESSFUL SET OF DELIVERY
STANDARDS IN NORTH AMERICA BY 1990

ENTSC DEMONSTRATION SYSTEM

SIGNAL SOURCES

525 LINES,
PROGRESSIVE SCAN,
16:9 ASPECT RATIO,
R,G,B FORMAT

