

# 6

## THIRD GENERATION - TELEPHONE AND TELEVISION

### 6.1 PRECURSORS - TELEGRAPH AND RADIO

### 6.2 THE INVENTION OF TELEVISION

### 6.3 THE INVENTION OF TELEPHONE

### 6.4 TELEPHONE VERSUS TELEVISION

*When television has fulfilled its ultimate destiny, man's sense of physical limitation will be swept away -- With this may come a new horizon, a new philosophy, a new sense of freedom, and greatest of all, perhaps, a finer and broader understanding between all the peoples of the world.*

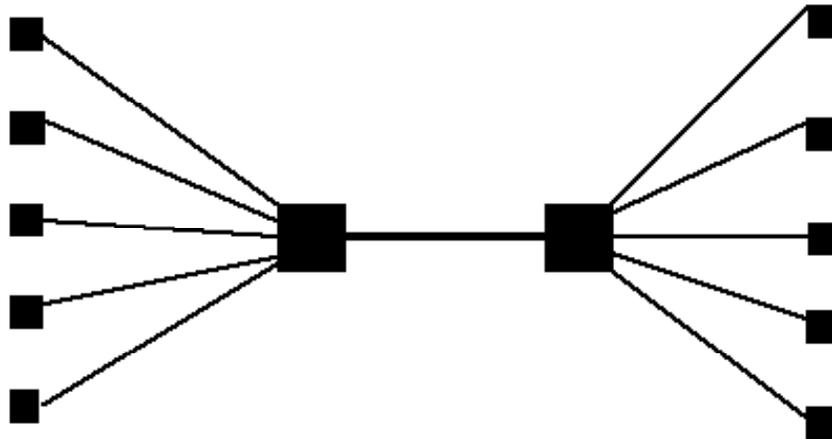
**David Sarnoff**, April 1931

*I think it will be admitted by all that to have exploited so good a scientific invention for the purpose and pursuit of entertainment alone would have been a prostitution of its powers and an insult to the character and intelligence of the people.*

**John Reith**, First President of the BBC, 1932

NUMBER OF NODES	NUMBER OF LINKS
2	1
3	3
4	6
5	10
6	15
7	21
8	28
9	36
10	45
100	4,950
1,000	499,500
10,000	49,995,0000
100,000	4,999,950,000
1,000,000	499,999,500,000

(a) RELATIONSHIP BETWEEN NUMBER OF NODES AND NUMBER OF NODE-TO-NODE LINKS IN A COMMUNICATION SYSTEM



(b) USE OF SWITCHING DEVICES AND TRUNK LINES TO REDUCE NUMBER OF LINKS

OF NODES AND LINKS, SWITCHES AND TRUNKS

	BRAILLE	ASL	SEMAPHORE	MORSE CODE
A				
B				
C				
X				
Y				

VARIOUS CODES  
PIGGY-BACKING ON THE ALPHABET

## TELEPHONE

Handset - furniture you talk into  
 Ear - sound waves  
 Waves over wires  
 Synchronous communication  
 Two-way communication  
 Democratic infrastructure

## TELEVISION

TV set - furniture that talks  
 Eye - light waves  
 Waves through air  
 Asynchronous communication  
 One-way communication  
 Autocratic infrastructure

## ESSENTIAL DIFFERENCE BETWEEN TELEPHONE AND TELEVISION



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