Ganesh kumar Ranjan
Faculty, MJMC,
MMHA&PU

DTH

CC-102 UNIT- 4

In traditional cable transmission, where MSO (Multi Service Operator) used to transmit the bouquet of satellite channels to subscriber through co-axial cable.
DTH evade cable operator and directly connect consumer to the broadcaster.

DTH stand for Direct- to Home also called Direct Satellite Broadcast Technology.

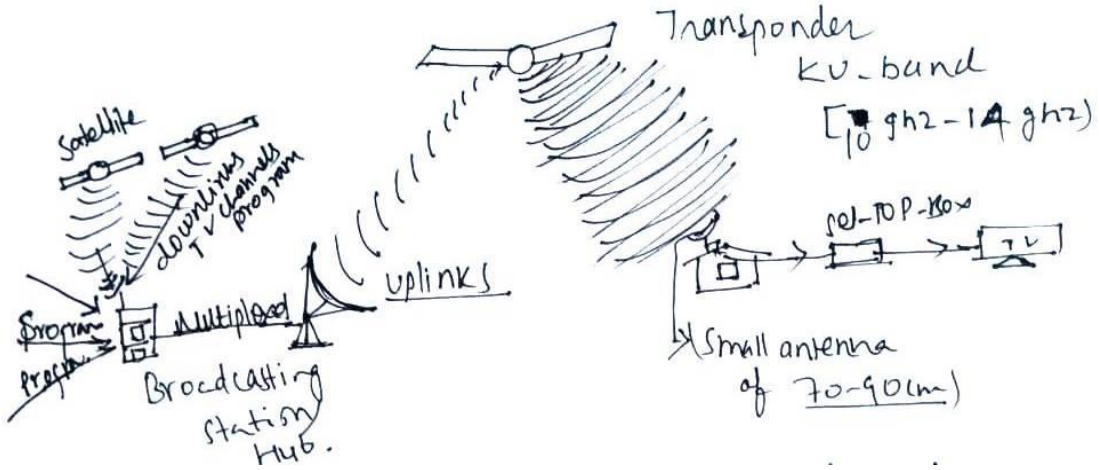
DTH came competing cable operator to provide higher quality of satellite signals and more numbers of channels.

In DTH technology one has a small dish antenna, a set-top-box to receive satellite signals.

In earlier satellite TV viewer used to have approx 10 ft wide dish antenna to catch satellite signals coming through c- band radio frequency of range 3.4 GHz to 7 GHz, which was a costlier affair. But DTH technology uses KU- band of radio frequency 10GHz to 14GHz, which can be received through 70-90 cm dish antenna.

Procedure-

The DTH operator downlinks all the channels he intended to include in its bouquet then multiplex these signals and uplinks it to a particular satellite from which its services operate. The subscriber receives these signals in an encrypt format which is decode by the set-top-box and then fed to the TV in analog or digital format as it requires.



DTH has five component

Broadcasting centre- receives signals from various sources, compress and scramble it. Beams signals to satellite. Different channels usually have a distribution center that beams program to different satellite(geostationary).broadcasting station usually uses big diameter dish antenna to catch signals from different satellites and various sources. After this broadcasting center converts all program in a high quality, uncompressed digital stream. This digital stream is compressed using proper format (MPEG-2/MPEG-4).

Without compression- 30 channels can be transmitted

With compression (MPEG-2)-200 channels

Encryption and transmission-all programs are encrypted in order to receive it free or by subscription.

Satellite Dish-a special parabolic satellite dish is used to receive signals. When signals reflected through the dish comes to a point called feed horn from where signals are amplified with the help of LNB (low noise block down converter)

Receiver- it decodes the encrypted signals with proper decoder embedded in a chip provided by satellite operator. It also converts MPEG-2 into analog format so that a standard TV can recognize it.

Advantage-

Wireless system can be used in remote areas

High quality video and audio

More channels can be transmitted

No mediator

Can be used to connect internet

Disadvantage-

Loss of signals during heavy rain

Changing satellite operator needs new receiver