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## 12 THINGS YOU SHOULD KNOW ABOUT ADDRESSABLE SYSTEMS

The government plans to permit delivery of pay channels only through an Addressable system. If the proposed bill is passed, any cable operator delivering a pay channel through a non-addressable system, will be jailed !

Incidentally, the proposed bill defines a pay channel as a channel for which the Customer is asked to pay. It is Not a channel for which the cable operator has to pay. Hence is may not be inconceivable that an MSO such as Siti Cable or Hathway, to increase its market share may plan to offer the Zee or Star bouquet, free, as part of its basic tier, without an addressable box. However, to return to the topic at hand.....

This article intends to highlight certain facts and capabilities of an analog addressable system, to help cable operators and "inputters" / franchisees get a clear idea of what needs to be installed and its impact on them.

### 1. INPUTTER OUT !

An inputter / franchisee cannot install an addressable system. An addressable system can only be installed at the headend where the modulators are located.

### 2. INPUTTER HAS NO CONTROL

The entire addressable system is located at the MSO's headend and controlled by him. Only the MSO can authorise or deauthorise a customer's STB. Since the MSO has complete control over the customer. It is likely that the MSO will ask the customer to directly send monthly subscriptions to the MSO and not to the franchisee/inputter.

Under declaration of pay subscribers to the MSO is impossible since the MSO will provide the STB for each customer and will authorise each customer seperately.

### 3. NEED MODS WITH IF LOOP



All modulators must have an external IF loop. The video and audio signals are scrambled at the headend by an encoder. The encoder receives the audio and video signals after the IF (Intermediate Frequency) stage of the modulator. After scrambling this IF signal, the encoder returns the signal to the modulator for further processing and final modulation, i.e. allocation of a specific channel frequency. As a result, any modulators currently in use that do not have an external IF loop will have to be replaced, if they have to be used for pay channels.

### 4. NO RETURN PATH NECESSARY

An addressable system (Analog or Digital) can be installed even on a CATV network without a return path. The computer at the headend simply sends out a signal authorising specific encoders for specific channels. The headend does not need to receive any authorisation or confirmation signal back from the set-top boxes. This system function is similar to that used for satellite receivers where the receivers are remotely authorised or deauthorised from the uplink center.

### 5. PAY PER VIEW POSSIBLE

Pay-per-view is a facility where a viewer can pay for and be authorised to view a specific event e.g. a cricket match on ESPN even though he may not be a monthly subscriber for ESPN. This facility is typically made available at a premium cost. Any, analog addressable system can offer this feature. A digital STB is not necessary.

Pay per view also does not require a reverse path. The customer can simply telephone the headend and request for the particular channel to be authorised for the duration of the match, for which the charge will be added to his monthly bill.

#### **6. EXPENSIVE SMS SOFTWARE**

Management of each subscriber's set-top box is done by a PC based system, installed with a Subscriber Management System ( SMS ) software. The SMS software not only authorises or deauthorises each customer's set-top box (STB) but also be integrated with a billing software, to generate statements for each customer. The SMS software is not provided by the encoder and STB vendor. It is to be purchased separately from a third party and is expensive. International vendors, often sell SMS software on a per user basis. The software alone would cost Rs 1 lakh to Rs 10 lakh and more.

#### **7. REFURBISHED SYSTEM**

Refurbished (second hand) addressable system encoders and set-top boxes are often available at throw away prices, especially for 550 MHz systems. A few points of caution:

- When purchasing, ensure that it is a PAL B/G system. American (NTSC 3.58), 550 MHz addressable set-top boxes are available for less US \$25 per STB but these are useless in India.
- Refurbished systems are available on a lot to lot basis, e.g. 20 encoders + 30,000 STBs. If you require additional encoders or STBs, sometime in the future, they are unlikely to be available !

#### **8. ADDRESSABLE SYSTEM IS FOR KEEPS**

Since all analog addressable systems are proprietary, set-top boxes or encoders from another manufacturer (often even different models from the same manufacturer) cannot be interchanged i.e. they are not inter-operable. Also, once you charge your customers for a set-top box, the customer will expect to use the STB for the foreseeable future and will refuse to pay for a new model, during the next few years. Hence select your addressable system with caution and ensure that it will be backed up locally by spares and service, for atleast 5 years or more.

#### **9. CUSTOMISED MESSAGES**

An analog addressable system can provide messages either to a specific user or simultaneously to all viewers. Customised messages may include a reminder to pay dues (see Table 1)

#### **10. DATA TOO !**

Some analog addressable systems provide the additional facility of delivery of data to customers. The data is carried in the analog video, during the Vertical Blanking Interval (VBI). Even large data files can be easily carried. The analog STB can be provided with a RS 232 port for interface with any PC.

#### **11. SMART CARDS**

An analog addressable system can also incorporate "SMART Cards". The SMART Cards can be authorised for a pre-paid amount like the SIM card in a mobile phone. Further, the SMART card, in an analog system, can provide a "Digital Key" to activate the scrambling capabilities of the decoder. If the earlier scrambling system is compromised or hacked, new SMART cards with a different digital key can be distributed at a minimal cost, securing the entire system once again.

#### **12. BIS SPECS**

The Bureau of Indian Standards is in the process of finalising specifications for analog and digital set top boxes. Their proposed draft specifications have been reviewed in detail a couple of months ago in this magazine. Incidentally, we are not aware of a single existing STB manufacturer, anywhere in the world who offers a product that meets all the BIS specifications !

