

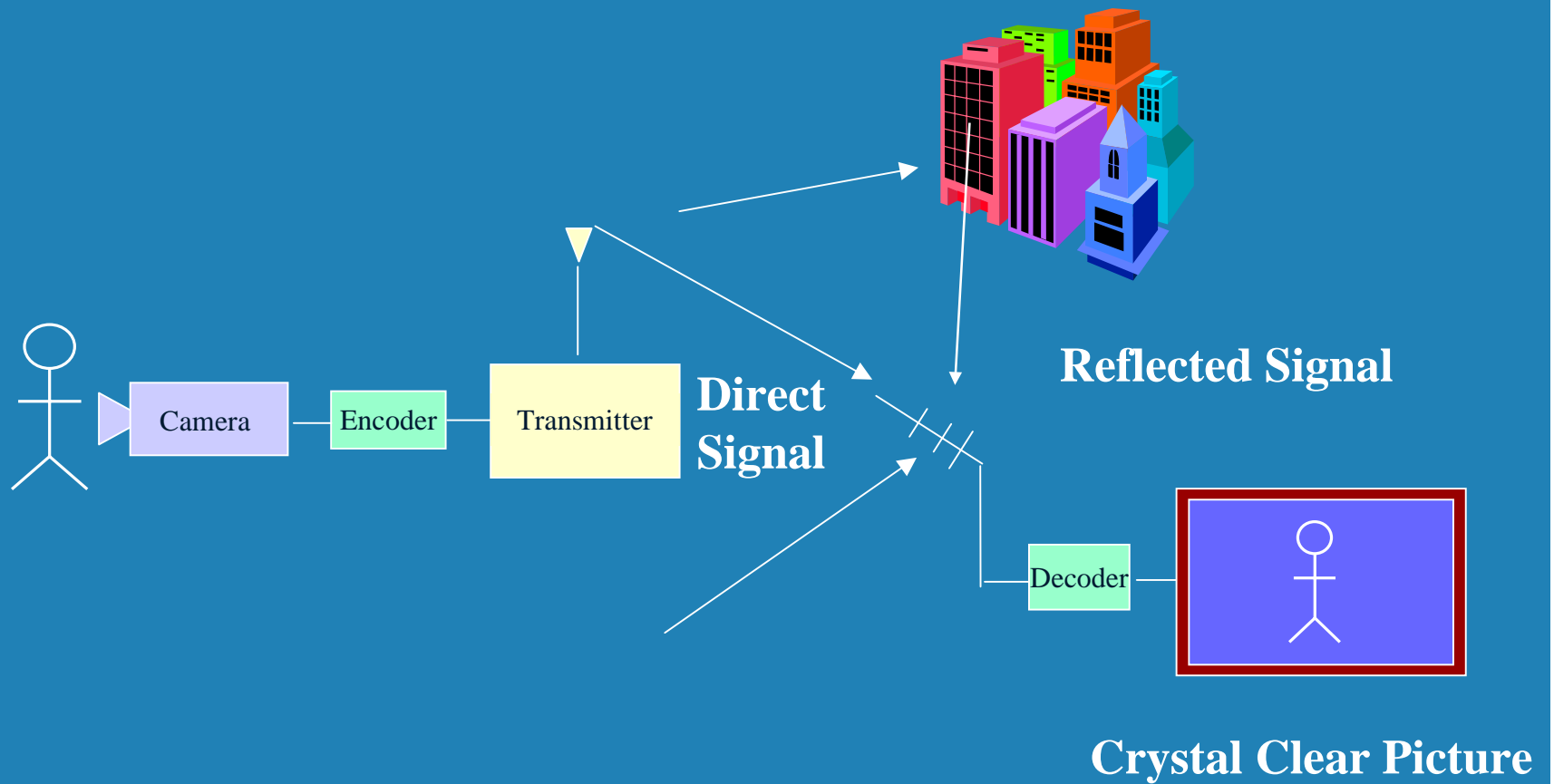


# Consultation Paper

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## Digital Terrestrial Broadcasting

# Digital Broadcasting - Better Reception Quality



# Digital Broadcasting - Spectrum Efficiency

Spectrum

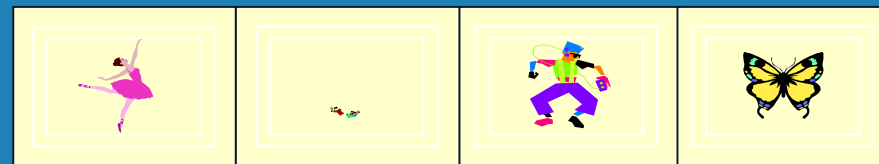
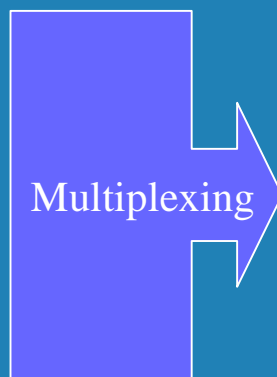


Channel



One frequency channel

**Analogue**



**Digital**



# What is DTT

- ✦ **Transmission of terrestrial TV services by means of bit streams**
- ✦ **4-5 TV channels plus data services can be transmitted by an analogue frequency channel**
- ✦ **Services receivable by set-top boxes or digital TV sets**

# DTT - Standard

- \* **To assess the 3 prevailing digital terrestrial TV (DTT) standards**
  - ATSC of US
  - DVB-T of Europe
  - ISDB-T of Japan
- \* **We have conducted**
  - technical trials
  - frequency planning study

# DTT

## - Choice of Standard

	<u>DVB -T</u>	<u>ISDB -T</u>	<u>ATSC</u>
No. of multiplexes	6	6	3
Mobile reception	✓	✓	✗
Channel bandwidth	8MHz	6MHz	6MHz
Interoperability	widely adopted	not widely adopted	not widely adopted
Adopted by	Europe, Australia, Singapore, India	Japan	US, Canada, South Korea



# DTT - Services

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## Network

- Multiplex

## Services

- TV Programme service
- Additional Service

# DTT - Licensing Regime

## Services

Multiplex Service

TV Programme Service

Additional Service

## Licensing Framework

Telecommunications Ord.

Broadcasting Ord.

Telecommunications Ord.



# DTT - Frequency Allocation

- \* **frequency to be allocated to multiplex operators**
  
- \* **assessment criteria for multiplex licences**
  - (a) network roll-out plan
  - (b) business plan of DTT take-up rate
  - (c) arrangement for the line-up of services

# DTT - Transition from Analogue to Digital

- ✧ **Objective -**

- switch off existing analogue transmission network as soon as possible to release radio spectrum for other uses

- ✧ **Means -**

- encourage simulcast of existing analogue services on digital platform

# DTT - Simulcast

- ✦ **At most 6 multiplexes available**

- ✦ **Two options -**

- (a) allocate a whole multiplex to each of the terrestrial broadcasters



- (b) allocate "guaranteed slots" on a multiplex to each of the terrestrial broadcasters



- ✦ **Option (b) preferred**



# What is DA Broadcasting

- ✦ **transmission of radio services by means of bit streams**
- ✦ **may provide CD-quality radio services and/or data services (e.g. billboard type advertising)**
- ✦ **receivable by specially-designed receivers**

# DA Broadcasting - Feasibility

- ✦ **To assess the feasibility of digital audio broadcasting (DA Broadcasting), we have conducted -**
  - technical trial
  - economic study

# DA Broadcasting - Findings

- ✦ **Technically feasible**
- ✦ **Economically not viable because**
  - high market price of DA Broadcasting receivers
  - unpromising advertising revenue
  - competition from other technologies

# DA Broadcasting - Policy Proposal

**To consider invite applications for DA Broadcasting services when**

- the market potential of DA Broadcasting and associated non-broadcasting applications becomes clearer
- the price level of DA Broadcasting receivers comes down
- the worldwide penetration of DA Broadcasting picks up momentum

# Sound Broadcasting - Regulatory Proposals

- \* separate regulatory framework for “transmission” and “provision” of sound programme services
- \* suitably relax existing regulatory restrictions
- \* subject sound programme services to competition provisions



# Implementation

- \* Commence work on legislative amendments for sound broadcasting services
- \* Invite applications for multiplex licences in 2001 with a view to commencing simulcast in end 2002 / early 2003
- \* Review in 5 year's time, or when DTT penetration reaches 50%, whether and when analogue TV should be switched off



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END