

Digital Television Switchover

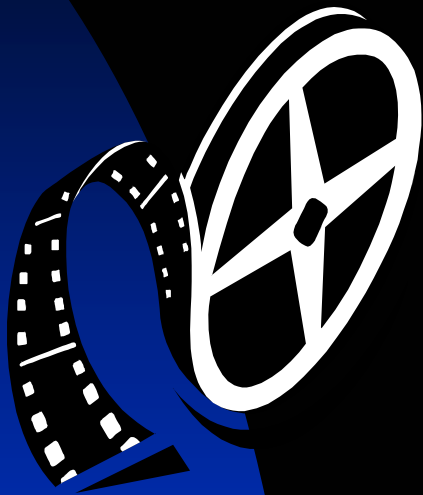
Michael Starks

for Jamaica Broadcasting Commission

1. Outline

- What is digital television?
- Why have a switchover policy?
- Pioneers & common principles
- Research and feasibility study
- Technology selection
- Digital switch-on
- Analogue switch-off
- Initial consultation

2. What is digital television?



010110 100110101

- Coding and compression
- More robust signal, greater capacity, more channels
- Potential for interactive services, HDTV, mobile TV, and spectrum savings
- Bigger picture: digital CDs, mobile phones, radio – and convergence of TV, telecommunications and computer technologies

3. Digital transmission platforms



1. Digital satellite
2. Digital cable
3. Digital terrestrial
4. (For the future) broadband & IPTV

4. Why have a policy?

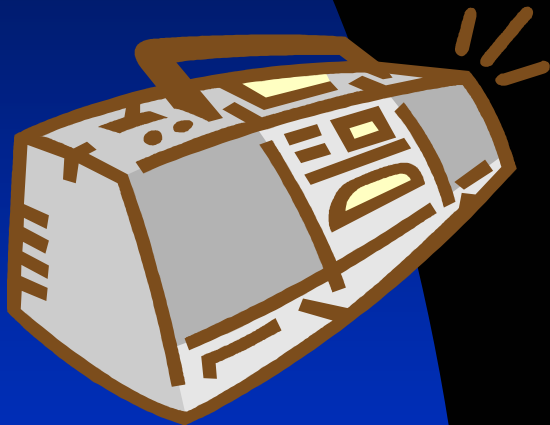
- Do nothing – let the market take its course?
- Risk of foreign domination
- No early spectrum saving benefits
- Consumer appeal of more channels and services
- Cultural benefits of new content and new providers
- Planned transformation of domestic TV in face of inevitable technology change
- Planned achievement of spectrum savings

5. Main policy elements



- Encourage voluntary take-up, let the market do the driving (no universal distribution of free set-top boxes)
- Give incumbent analogue terrestrial broadcasters digital terrestrial spectrum
- Simulcasting plus new services
- End phase: compulsory analogue terrestrial switch-off

6. What about digital radio?



- Similar basic technology of coding and compression
- More robust technical quality, scope for better reception
- Coexists with FM and AM radio
- Some talk about eventual substitution, but only talk
- Practical obstacles
- Start digital radio but don't count on achieving complete switchover

7. Digital TV switchover pioneers

Netherlands	2006
Finland	2007
Sweden	2007
United States	February 17 th 2009
Switzerland	2008-9
Germany	By 2010
Spain	2010?
Japan	July 24 th 2011
France	2011
UK (first to start)	End 2012
Australia	Starting 2010-12

8. Common principles

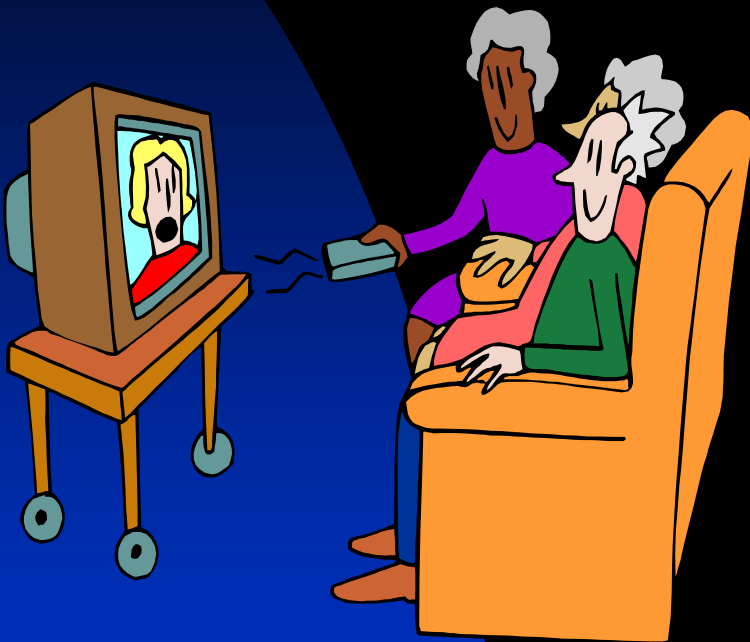
- No country has skipped digital terrestrial
- Analogue terrestrial switch-off is the goal
- Digital spectrum for analogue broadcasters
- Free-to-view option (terrestrial and/or satellite)
- Switch-off easier where role of terrestrial is small
- Where terrestrial is dominant, high digital take-up is a pre-condition for switchover
- Subsidy can play a role
- Stakeholder collaboration to reduce risks

9. Don't think this is easy



- Bankrupt commercial broadcasters – e.g. in UK & Spain
- Slow take-up, the market stalls – e.g. in USA, Finland, Sweden, and Australia, at the outset (with subsequent recoveries)
- Political concern about public opposition, which in a stalled market is rational
- Switch-off date postponed – e.g. USA, Australia, Italy (twice)
- Rising public costs from a protracted timetable, e.g. Australia

10. Two key relationships



- Government and regulator with incumbent analogue terrestrial broadcasters
- Broadcasters with receiver manufacturers and retailers

11. Feasibility study



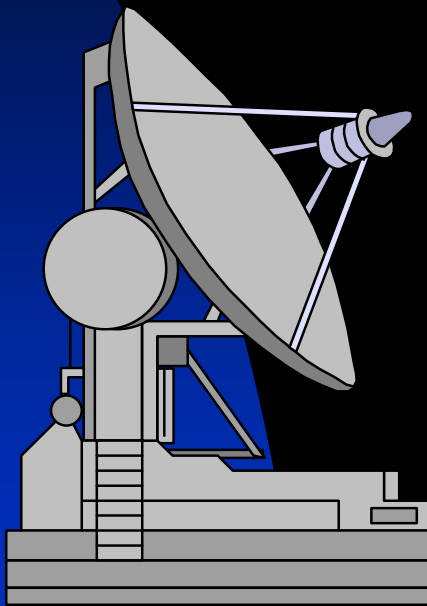
- Essential research
- Assessing the proportion of households affected
- Cost-Benefit Analysis
- The consumer proposition
- Focus groups to test willingness to pay
- Modelling digital take-up & estimating timescale

12. Technology selection



- DVB (DVB-T2), ATSC, ISDB etc, criteria for selection?
- HDTV, boosted by flat-screen TV displays? also widescreen
- MPEG-4, improved compression
- Mobile TV?
- Broadband & IPTV: beyond more channels to on-demand services
- Conditional access, API, EPG

13. Achieving full digital coverage



- Match analogue terrestrial? Easiest politically, but expensive
- Free-to-view alternative with no requirement for subscription?
- Role of satellite where digital terrestrial absent?

14. Digital terrestrial switch-on



- Availability of new frequencies, any analogue changes?
- Spectrum for incumbent analogue broadcasters
- Simulcasting plus?
- New broadcasters and services? Selection criteria?
- Financial framework
- 'Must carry' obligations
- Switch-off obligations?

15. The use of subsidy?

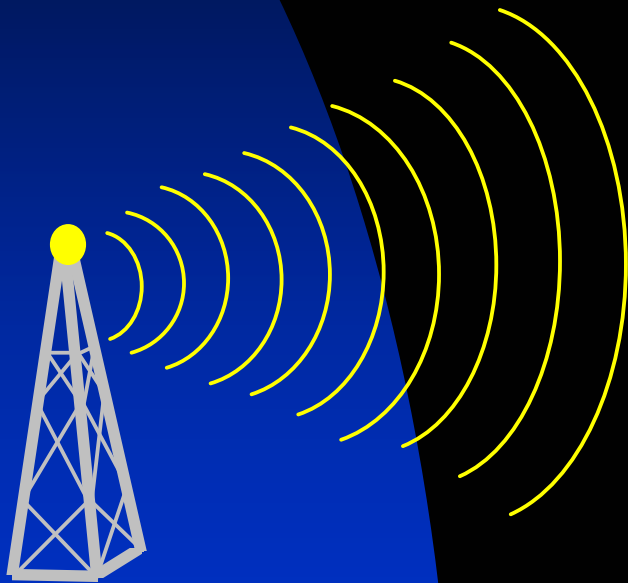


Market cost

Subsidised
cost

- Possibility of subsidising start-up (legal risks)
- Risk of promising late adopters a subsidy
- Targeting consumers inhibited by cost
- Targeting consumers inhibited by technical complexity
- Involving charities

16. Analogue switch-off



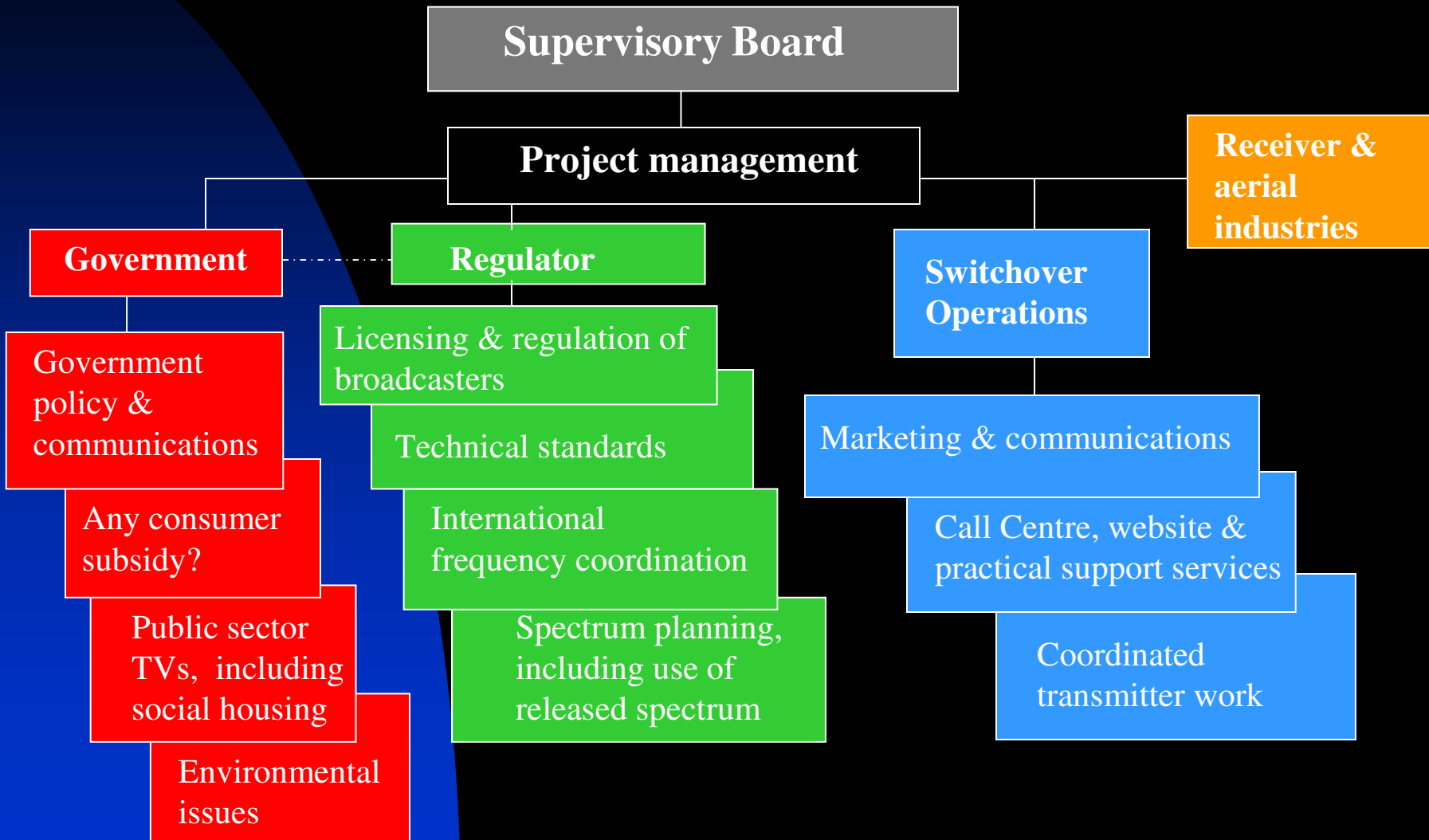
- Setting the timetable
- Post-switchover spectrum plan & frequency changes
- Analogue cable?
- Receiver regulation and/or receiver labelling
- Recording issues
- Risk analysis

17. Public persuasion



- Communications strategy
- 'Softly, softly' during period of voluntary take-up?
- Why make switch-off compulsory?
- Focus on late adopters & research main factors
- Operational publicity

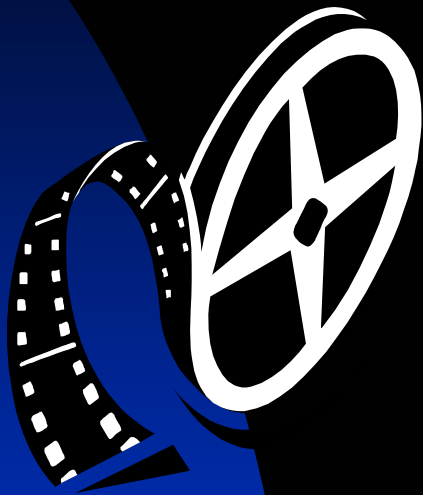
18. Responsibilities



19. Some general observations

- Every national market is different: platform mix and extent of analogue multi-channel are key factors
- Political risk diminishes if households switch voluntarily, so the consumer proposition needs to be attractive
- The value of the free-to-view proposition should match the receiver cost
- Stakeholder collaboration is essential to the reduction of risk

20. Getting started



010110 100110101

- Gathering of stakeholders
- Understanding the subject and starting with the question 'Do we need a policy?'
- Publishing an explanatory paper, including questions for consultation
- Digest consultation responses
- Research
- Feasibility study



Digital Television Switchover

Thank you