
FUNDING DIGITAL SWITCHOVER(S)

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INTRODUCTION



1. **Brief review of an economic study by Spectrum Value Partners (commissioned by mobile phone operators)**
2. **Funding digital switchover(s)**
3. **OPEN DISCUSSION**

TRYING TO INFLUENCE DECISIONS



- **Battles over the use of the digital dividend**
 - in Brussels
 - in individual countries
- **Decisions about spectrum allocations are being made by politicians, lawyers and economists**
- **Studies have been published by:**
 - **O&O/DotEcon (commissioned by broadcasters)**
“be careful with spectrum auctions”
 - **Spectrum Value Partners (commissioned by mobile phone companies)**
“more spectrum for mobile phones”

REPORT COMMISSIONED BY TELCOS



- ***“Getting the most out of the Digital Dividend”*** issued on 6 May by Spectrum Value Partners (SVP)
- SVP was commissioned by Ericsson, Nokia, Orange, Telefónica and Vodafone
- SVP look at the economic benefits of reallocating some of the UHF band (470-862 MHz) for use by mobile phone services (two-way mobile broadband)
- Based on the Net Present Value (NPV) generated by services (broadcasting or mobile phones) using the UHF spectrum over the next 20 years

Go to <http://www.spectrumstrategy.com/> and then click on [Getting the most out of the digital dividend](#)

SVP METHODOLOGY



- **SVP estimate that the NPV generated by broadcasting in the UHF band is about €800bn**
- **If some of this band were reallocated to mobile radio services, the NPV due to broadcasting would be reduced**
- **However, if mobile radio can generate more value from spectrum than broadcasting, the total NPV would increase as larger amounts of spectrum are allocated to mobile radio**

SPV RESULTS



Exhibit 34: The net value added of allocating UHF to mobile

Market Allocation	40 MHz	60 MHz	80 MHz	100 MHz	120 MHz	140 MHz
Scenario 1: 'Mobile makes headway'	160.0	165.1	163.3	159.1	152.3	141.3
Scenario 2: 'Mobile broadband takes off'	76.6	84.5	94.2	94.5	93.2	87.9
Scenario 3: 'Broadband is mobile'	62.6	84.8	127.1	135.3	140.9	144.8

- ***“Although results differ from country to country and between scenarios, allocating at least 92MHz of UHF spectrum to mobile operators would be most likely to maximise additional value for the European economy as a whole.”***

SVP RESULTS



- NPV generated by broadcasting = €800bn
- €160bn of NPV could be added by reallocating 40 – 100 MHz to mobile phones
- Total = €800bn + €160bn = €960bn ➡ **a factor of 1.2**
- But Vodafone has previously claimed that
 - *“the economic surplus generated by the mobile industry is 5 times that of broadcasting;*
 - *broadcasters have 5 times the amount of spectrum;*
 - *hence, the mobile industry is 25 times more efficient than broadcasting”* ➡ **a factor of 25**

SVP ASSUMPTIONS



- The biggest weakness of SVP report is that it starts from a purely economic perspective
- Although SVP acknowledge that broadcasting generates public value, they make the valid point that it is “unquantifiable”
 - but subsequently ignore it (as if it were “zero”)
- SVP assume that only PSBs deliver public value
 - O&O/DotEcon observe that all free-to-air broadcasters deliver some public value
- Some digital TV channels offered by PSBs have never been available on analogue TV

SVP ASSUMPTIONS



- *“According to the CSI STB roundtable, DTT set-top-boxes have a life-span of around four years. Consequently, we assume that boxes need to be replaced every four years.”*
- The biggest cost in changing broadcast technologies is the cost of replacing the consumer’s STBs – but SVP has managed to ignore this problem by assuming that everybody automatically replaces their STBs every 4 years
- CE manufacturers would be delighted if consumers replaced their STBs every 4 years!

COST FREE ??



Digital switchover involves:

- direct costs for new TV hardware in homes
- indirect costs such as:
 - installation costs incurred by consumers (including receiving antenna modifications)
 - publicity campaigns
 - modifications to transmitter networks
- Despite these costs, the SVP report assumes that digital switchover is a **“cost-free”** process

CONCLUSIONS



- The SVP report is full of many other dubious assumptions
- By using an ideal model based on imperfect assumptions, SVP ignores important aspects of the real world
- We need to raise serious doubts about SVP's conclusions in the minds of objective observers
- The SVP report is an example of why Economics is known as **“the dismal science”**

FUNDING DIGITAL SWITCHOVER

PAYING FOR DIGITAL SWITCHOVER



- Broadcasters are understandably concerned by the cost of digital switchover (new transmitters)
- But the real cost of the digital switchover (new receivers) is being paid directly by consumers
- Most consumers convert to digital TV because:
 - it is not very expensive
 - they appreciate the wider choice of TV services
- Paying a one-off cost of €30 for a digital set-top box gives access to many new free-to-air services

MORE DIGITAL SWITCHOVERS ?



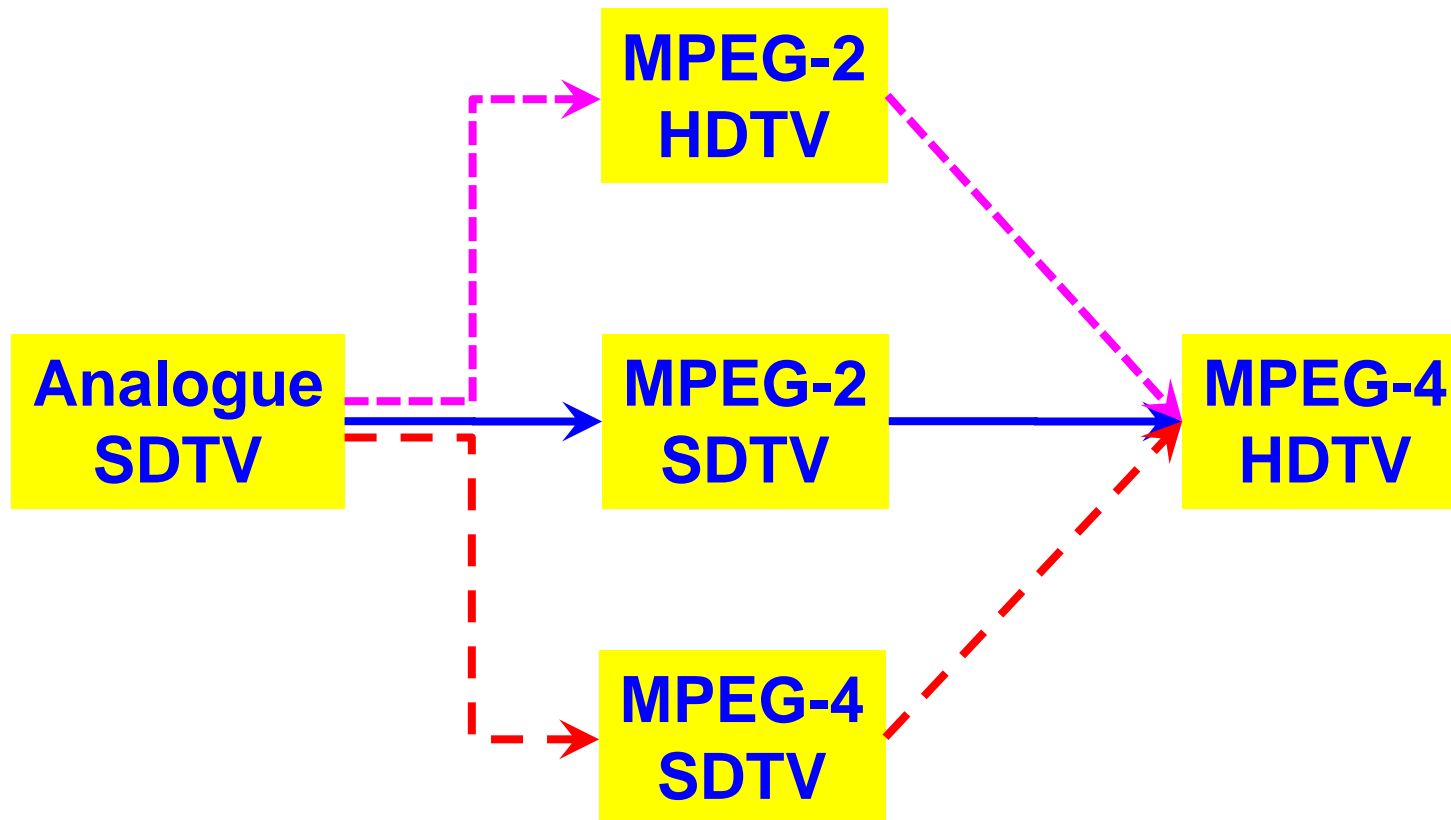
- **The closure of analogue TV is simply the first digital switchover**
- **In the future, broadcasters will need to use new technologies (e.g. HDTV) and better compression systems (e.g. MPEG-4 AVC, etc.)**
- **HDTV will require more spectrum than SDTV**
- **Better compression systems will permit much better spectrum efficiency**
 - **more or better TV services in same spectrum**
 - **same range of TV services in less spectrum**

BETTER COMPRESSION



- Many regulators see “better compression” as an opportunity to take spectrum away from broadcasters
- Many consumers will object to being forced to buy yet more new technologies soon after the first digital switchover
 - especially if they see no direct benefit
 - broadcasters using less spectrum for the same services offers no benefit to consumers
- How could we persuade consumers that they should pay for a 2nd or 3rd digital switch-over?

DIGITAL SWITCHOVER(S)



IMPORTANCE OF HDTV



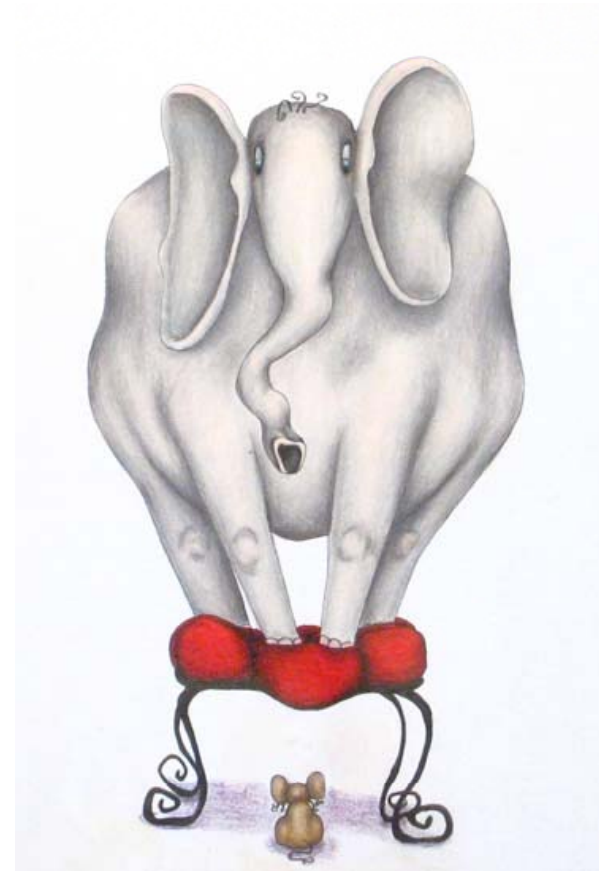
- **HDTV is inevitable**
 - just like colour TV replaced black-and-white TV
 - all TV sets being sold today are “HD-ready”
- **HDTV is an obvious additional benefit**
 - but many consumers will not upgrade their hardware so that “others” can watch HDTV
- **Broadcasters need to recognise the scale of this problem – and to find some innovative ways to fund future digital switchovers**

FINANCIAL ASSISTANCE ?



- If broadcasters release spectrum by changing to more efficient technologies (e.g. DVB-T2, SFNs, MPEG-4 AVC, etc.), the new users of the spectrum should pay the costs of:
 - upgrading transmitter networks
 - upgrading consumer's hardware (e.g. STBs and antennas)
 - costs of managing the switchover (e.g. publicity, telephone help lines, etc.)
- Vodafone has publicly suggested that they might provide such financial assistance

FINALLY



**Telco = Elephant Broadcaster
= Mouse**



OPEN DISCUSSION

OPEN DISCUSSION



- **Questions to individual presenters**
- **Strategic issues**
 - **What are our overall objectives?**
 - **How do we deal with the differences between countries?**
 - **How can broadcasters get the best result from combined lobbying?**