

Ofcom

Memorandum of Evidence **Response to Consultation**

"Coexistence of new services in the 800 MHz band with Digital Terrestrial Television"

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1 July 2011

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Preface

On Friday 3 June 2011, under the headline:

Warning over 4G signals that threaten to hit TV viewing

the *Financial Times*, reported:

The digital television signal for hundreds of thousands of UK homes will be affected by interference from 4G mobile networks when they come online in 2013, the telecoms regulator has warned.

[Ofcom] estimates about 760,000 homes will be affected ... Ofcom believes the vast majority of the 760,000 will be able to fix the problem by fitting a filter to their TV aerial, a £10 device that could be installed without the need of an engineer.

For about 30,000 homes [reliant on the digital terrestrial signal] filters will not solve the problem. They include properties such as blocks of flats where a large number of TV sets share a rooftop aerial and require an amplifier to boost signal.

In cases where filters do not help, Ofcom said a "last resort" would be to offer the affected TV owners another way to receive the digital signal, such as Freestat, although this could cost up to £10m.

I phoned Ofcom for a copy of the consultation.

As I read the document it became obvious you did not need to be a seer to intuit that Ofcom's plans raise far more serious issues for consumers - and politicians - than Ofcom has fully spelt out, or faced up to.

Ofcom says [1.13] the consultation is to seek input from stakeholders and any other interested parties - I qualify on both counts, as a DTT reliant viewer and an interested party.

Ofcom says [1.13] it is not seeking to limit the issues on which respondents may wish to comment and respondents are invited to include representations on any issues which they consider to be relevant.

I focus on issues of critical importance to consumers which Ofcom has recognised, but for which Ofcom has not proposed practicable solutions - perhaps because Ofcom has not fully appreciated what is at stake for consumers. My response spells out starkly the reality of how those issues will affect consumers, and why fundamental facets of Ofcom's mitigation plans require major refinement, and - in some crucial respects - revision.

Ofcom says [Annex 1, A1.6] it would be helpful if: (1) respondents could include direct answers to the questions asked in the document, and that it would also help if: (2) respondents can explain why they hold their views and how Ofcom's proposals would impact on them.

My response satisfies Ofcom's second request, but it's difficult to 'match' my response directly to 'fit' a specific question. The overall thrust of my response falls within the combined purview of Questions 2 and 3.

Introduction

If I am one of the 760,000 homes affected

I desperately hope my household is not one of the estimated 760,000 homes who lose their DTT television service temporarily or permanently when 4G is switched on in their area.

I even more fervently hope my household is not one of the estimated 30,000 homes, among the 760,000 homes, for whom DTT television service cannot be restored using one or more of the interference mitigation (why not elimination?) measures described in the consultation.

If I am affected, this response will be acutely relevant to my situation.

Should I not be affected, this response will still be relevant to the hundreds of thousands of households that are affected – **on whose behalf I respond as their proxy**.

My DTT

My TV Equipment

Digital Terrestrial Receivers (Set-top boxes), Television Sets & Video Cassette Recorders

For 40 years my home has been in a communal block of 32 flats, with a flat-roof-top aerial. In July 2010 the aerial was "upgraded" - according to the quote for the work involved, it was a **"16 element super range GRP "A" aerial"** - and a different type of aerial socket, to work with the new type of aerial, was installed in every flat.

Inside my flat: after the aerial socket, I have a **Lobgear Aerial Booster**, with aerial cables leading to three identical Sony top-of-range **Digital Terrestrial Receivers** (aka set-top boxes), which feed into three **television sets** in three different rooms - one at very far side of flat. **Aerial cables** are nailed at skirting board level, pass through holes drilled in three walls, and go up and along top of doorframes and along ceiling/wall junctions to reach the furthest set. The configuration of equipment for two of the TV sets includes a Sony top-of-range **Video Cassette Recorder**, and a Sony top-of-range **DVD Player**. SEE diagram on page 7.

My reliance on DTT: How I use DTT radio & television

I have no interest whatsoever in programmes about sport (I hate football with a vengeance), game shows, soaps, 'reality' shows, chat shows and celebrity-type programmes, but television and radio, via DTT, is absolutely central to my life - every single day, all through the day and for most of the night.

Every week I go through my TV programme magazine delivered from my newsagent, marking the programmes on TV and radio I wish to watch/listen to, then numbering them in chronological sequence throughout their respective days. I also mark programmes I will record on video cassette, either because I shall not be at home when they are scheduled or because their scheduled time clashes with another programme I wish to watch/listen to.

Each day at 5.00am, with my marked-up TV programme magazine in one hand and a remote (each of three identical remotes is tuned differently to work with each different make of TV) in the other hand, I use the superb Sony Electronic Programme Guide to pre-set the programmes I wish to see, to come on automatically throughout that day, evening and night. For programmes I wish to record, I set them to record on the Sony EPG on the TV set, *and* use the VCR remote to set the concomitant time to record on the VCR cassette.

My video cassette recordings fall into two categories. First: cassettes I keep, some among books on the same subject, others grouped by genre, *ie* film; music; current affairs; comedy. Often, a programme I plan to record and keep is on a subject closely related to something I've recorded previously, and there is enough unrecorded time on the cassette to record the additional programme - thus I group programme material conveniently by type and subject. On the cardboard outer-cases of the cassettes I keep, I sellotape descriptions of the recorded material, adding press cuttings of reviews of the programmes.

Second: cassettes of programmes I recorded because I particularly wished to see/hear them, but after playing them back I re-record over them again and again.

Why I need three Sony Set-top Boxes

If there is only a single set-top box at point of entry of aerial into home, whatever channel that box is tuned to, will determine the channel appearing on every TV set in the home. *ie* Every TV set will be tuned to the same channel. To watch (and most importantly record) different channels on different TV sets, each TV set needs its own set-top box.

My reliance on DTT: The channels I rely on for the programmes I need

My DTT dependency to watch/hear the programmes I rely on cannot be over-emphasized, viz *BBC NEWS 24 throughout the day, 5.00am-12.00am; Money Box; The World at One; PM; BBC Parliament* (recordings of **Select Committee hearings**: Friday Saturday Sunday evenings); *Daily Politics; Newsnight; Sky News Press Preview* (11.30pm); *The World Tonight; The World This Weekend; The Westminster Hour; Any Questions?; Week in Westminster; Question Time; This Week* (11.35pm Thursday); *The Politics Show; BBC London News; Channel 4 News; The Media Show* (R4, 1.30pm Wednesday); *Analysis; The Report; File on 4.*

These programmes' importance to my writing & analyst work on consumer & money issues, and in politico/media arena - I'm a member of Chartered Institute of Journalists - is obvious.

I also regularly listen to/watch: *World Service; Radio 4 Extra*; and selected BBC TWO and BBC FOUR documentaries, comedies, and films.

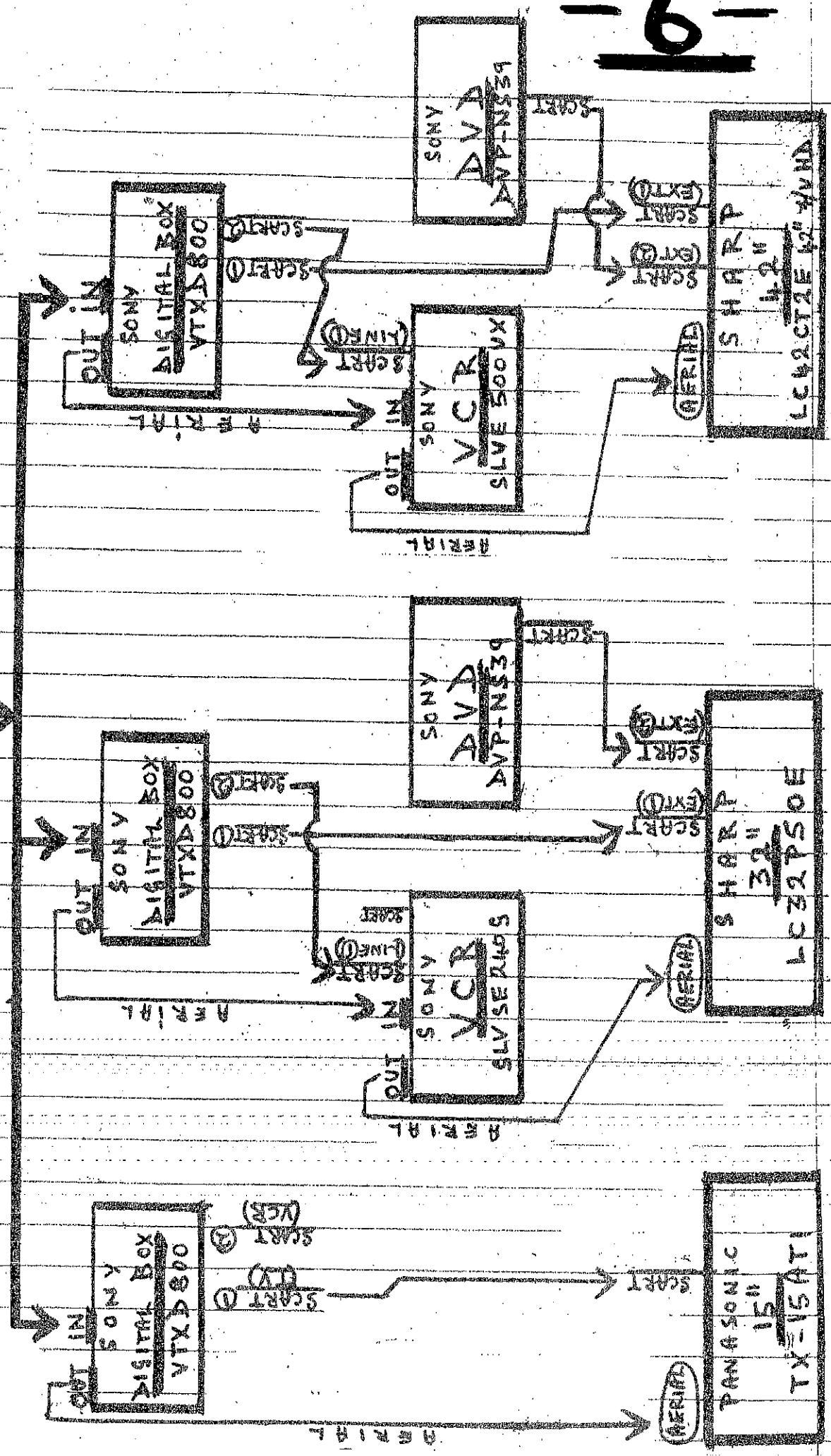
Consequently the channels set as my Favourites on all three of my Sony EPGs are as follows: BBC Radio 4; BBC World Service; BBC Radio 4 Extra; BBC Radio 5 Live; *and* BBC NEWS; BBC Parliament; Sky News; BBC ONE; BBC TWO; BBC FOUR; Channel 4; More 4; Film 4; Yesterday; Dave.

These channels are all I need and want - I have no wish for High Definition or anything else.

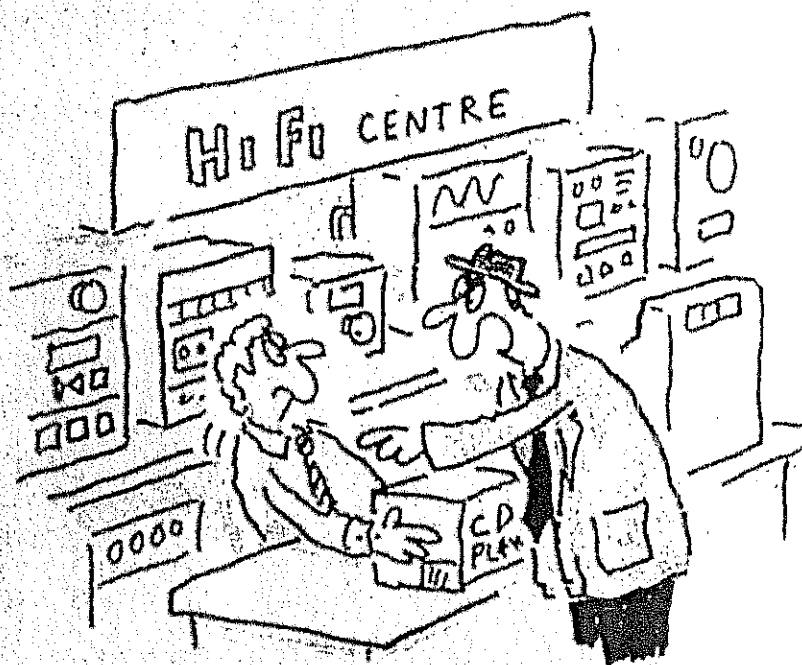
My DTT - Conclusion

From all the foregoing it is obvious how any loss of DTT service, for a few hours or a day, let alone weeks and weeks waiting for call centres to get technical engineers to restore the DTT service after the switch on of 4G, would be far more than a serious inconvenience ...

ROOT Aerial (32 Watts)
Aerial Socket
LOG GEAR Aerial Booster

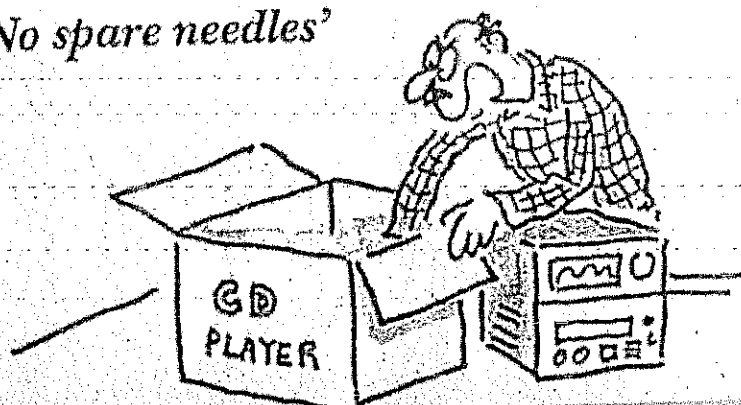


Bruce buys a CD player



'I'll buy it if you guarantee they won't invent anything more advanced'

'Typical! No spare needles'



My proven 'vulnerability'
My innate disability to install or understand any type of TV set or equipment

The cartoon on the previous page ("**Bruce buys a CD player**") was presented to me almost 20 years ago in acknowledgement of my legendary inability to operate - let alone install, or connect up - *any* type of mechanical, electronic or computer-type equipment.

Actually, it's not a joke, and to class me as technophobic would be a colossal understatement.

Since childhood I've realized my mind does not function like other peoples in relation to *anything* mechanical, electrical or science-related.

How equipment works; how electronics and digital work; how wireless, DTT, and spectrum [whatever that means] work, is a complete mystery to me, so what connects to what, and what descriptive words mean, are all meaningless to me, no matter how often people explain, or how often I read handbooks or "simple to follow" instructions.

I was forbidden to use the microwave oven at work, after one I'd tried to use causing a fire. I cannot understand how to connect up or operate a microwave ... or a washing machine.

Every time in recent years that I've bought a TV set or TV related equipment I have not been able to make the TV set or equipment work at all, or to function fully as it should, eg

- **First VCR.** (July 1995) Required home visits three times from John Lewis appointed technicians to get installation & connections right so everything worked.
- **Second VCR.** (December 1995) Despite following exactly the installation and connections process as described during the previous visits by John Lewis appointed technicians (which I had written out), I again needed visits by John Lewis technician ... twice.
- **First Set-top Boxes.** (February 2004) Needed two visits by John Lewis technician.
- **First DVD Player.** (May 2004) Needed three visits three by John Lewis technician.
- **New TV set + Set-top Box.** (April 2005) Needed one visit by John Lewis technician.
- **Replacement Non-iDTV TV set.** (May 2005) Reconnected cables as they had been connected on previous TV set/Set-top Box. Everything worked - *no need for technician*.
- **Replacement Non-iDTV TV set.** (January 2006) Despite John Lewis categorical assurance all I had to do was connect all the cables and wires exactly as they had been configured for the TV set being replaced, I could not make the TV (nor the VCR or DVD) work.

John Lewis sent a member of their store's staff to my home. He understood that some of wires *did* need to be connected up *differently to before!!!* Everything then worked.

He drew a diagram showing how every cable and wire connected to precisely which socket on which piece of equipment. (I still have his drawing). I have since made a neat copy of his configuration for easy reference [as in the diagram on page 7].

Note: I have sellotaped labels at both ends of every cable and wire describing into which socket on what piece of equipment that end of that cable or wire should go. So, when equipment has to be disconnected for furniture to be moved, room cleaned or equipment repaired, I know what to connect to what when I put everything back.

- **Replacement TV set (with built-in Freeview and High Definition).** (June 2010) I did not want the built-in Freeview or HD, as I needed to continue using my Sony Set-top Box and its remote, which allows me to have identical controls and EPG screens for all my TV sets, so it's easy to set up EPG sequences and operate remotes for all my sets. But TV sets now come with Freeview built-in. [The TV set's built-in EPG, when I subsequently investigated it, is far, far inferior to my Sony Set-to Box EPG and remote. Indeed, for my needs it is frankly unuseable.]

After my experience in January 2006 (*SEE above*) I repeatedly sought categorical guarantee that all I needed to do was connect the cables and wires exactly as they had been configured for the TV being replaced, and the TV (and VCR and DVD) would work. So nervous was I of not being able to connect everything up so it would all work, that I made two visits to John Lewis before buying, and on each visit continually sought confirmation - always the answer was 'yes, definitely'.

When the TV set was delivered I could not get it to work. I had to revisit John Lewis, who immediately arranged for a technician from the company they rate as having the highest level of expertise, to come to my home. To get everything to work as it should required three more visits over the next month - an incredibly stressful experience.

The foregoing demonstrates why it would be extremely unwise verging on absolute madness, to expect me to attempt to install DTT receiver filters behind any of my three TV sets.

nb Instructions and advice over the phone, *eg* from a call centre would be of no help, as, aside from me not being able to understand any of the descriptive terminology, the adviser could not appreciate the detailed intricacies of how all my existing equipment is configured and connected, and would therefore give incorrect instructions.

To access behind two of my TV sets to install anything necessitates moving heavy furniture in one room, and standing on a small ladder to manoeuvre the awkwardly positioned TV set and all its related equipment high up near the ceiling in another room. To follow any instructions over the phone would take a considerable amount of time.

The John Lewis letter

Because of my disability, my 'vulnerability' in everything technical, John Lewis have provided me with a letter for me to produce each time I go to 5th floor of the Oxford Street store where their TV sets and similar types of technical product are sold.

The purpose of the letter is to ensure that the John Lewis partner assigned by the Section Manager or 5th floor Reception Point Assistant to advise me on any product, is indubitably the highest qualified and best suited to understand and make allowances for my disability.

SEE copy of the John Lewis letter on next page.



BY APPOINTMENT TO
HER MAJESTY THE QUEEN
SUPPLIER OF HABERDASHERY
AND HOUSEHOLD GOODS

CEN/026840

4 August 2010

- 10 -

John Lewis

johnlewis.com

Mr B Dalton

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Dear Mr Dalton,

Further to our telephone conversation and as mentioned in my first letter, please find detailed below as requested some text relating to your specific requirements when you visit the Audio and Home Technology department.

To the Section Manager or Reception Point Assistant on duty.

Mr Dalton is a long standing customer who has purchased a number of items from us.

By his own admission his technical knowledge is non existent and he would describe himself as a "technophobe".

Please ensure that our most senior assistant with the best technical knowledge available is able to assist Mr Dalton with any query or enquiry that he has.

Yours sincerely

Gareth Jones
Manager

Audio/Home Technology Department



When my DTT service disappears because of 4G switch on

Consumer Information & Support

- 1 Ofcom would be mistaken to assume households with multiple TV sets have a "primary" set and that the other sets in the household are "secondary" [6.11 3rd bullet]. All of my three TV sets have equal "primary" status.
 - 2 There must be no doubt over meaning of the words "old", "disabled", "vulnerable" which will determine the provision of on-site support by technical engineers, after consumer has phoned MitCo call centre helpline to report loss of DTT television service.
 - ▶ **Old:** Should mean over State Pension age.
 - ▶ **Disabled:** Registerable under the Chronically Sick & Disabled Persons' Act 1970. After assessment by medical and social service professionals, some people, for sound reasons prefer not to be registered as "disabled". Instead, they have a local authority letter certifying their eligibility to be registered as "disabled". I have such a letter.
 - ▶ **Vulnerable:** this all-purpose cliché is used ambiguously, depending on the context, eg a child is categorised as "vulnerable" if s/he is believed to be open to sexual abuse. In context of restoring DTT service, it must include anyone sharing my innate disability to install or understand *any* type of TV set or equipment as detailed in previous section.
- (a) "We have assumed that households with standard domestic installations would in 80% of cases be able to self-install filters as the filters can be installed either near the STB [Set-top Box] or IDTV [Integrated TV]. **Old or disabled** consumers may find this challenging and some additional support for these people may be appropriate." [p29: 5.38].
"Where an amplifier is used ... installation may require access to the roof." [p29: 5.39].
- ✦ "Some additional support" & "may be" are too vague to give certainty or reassurance.
On site installation by a technical engineer will be needed.
- (b) "While many householders may have minimal problems installing DTT receiver filters behind their TV, **some householders ... may find this more difficult**. It may be appropriate to provide an enhanced level of support for these households." [p47: top]
- ✦ As above, "may be" and "enhanced" are too vague to give certainty and reassurance.
On site installation by a technical engineer will be needed.
- (c) "It may be decided that there is a need to arrange home visits by engineers for some vulnerable DTT consumers who need to fit receive [*sic*] filters." [p54: 6.51]
- ✦ Of course home visits by engineers to fit receiver filters **will** be needed, but aside from the anxiety fostered by the doubt implicit in the flakiness of "may be decided":
- ① Who will decide to arrange for an engineer to make a home visit?
 - ② Will the MitCo helpline person who answers phone have authority to arrange an appointment when consumer calls on day his DTT service disappears?
To minimize time consumer will be without any DTT television service, appointments must be arranged at once for the earliest possible date and time.
 - ③ Will the engineer arrive for the appointment equipped with receiver filters?

- (d) Old/disabled/vulnerable consumers will need home visit technical assistance from authorised TV engineers to deal with not only DTT receiver filters, but also, if their DTT service is not restored by installation of the DTT receiver filter, to deal with all the solutions postulated, *ie* the whole range of consumer-based mitigation options:

To restoring DTT service

- ① DTT receiver filter(s)
- ② Re-orientating DTT aerials and improvements
- ③ Adjustments to the DTT installation

To provide alternative to DTT service

- ① Platform change – to Virgin Media cable service, or
- ② Platform change – to Freesat satellite service

“Individual mitigation measures on their own are unlikely to restore DTT service to all households and so mitigation measures would probably need to be used in conjunction with one another in order to be effective.” [p25: 5.14]

- 3 “For communal aerial systems, it may be possible and appropriate to use **larger and more complex filters** which should fix interference even in higher channels.” [p24: top]

“Communal aerial systems – For these households, a filter will need to be inserted before the launch amplifier. For systems where the highest channel used for DTT is around channel 56 or below, a small DTT receiver will probably work. For systems in areas where the highest channel used for DTT is channel 57–60, a larger, heavier and more expensive filter will probably need to be fitted, again before the launch amplifier. **Installation of filters for communal aerial systems will probably require the services of a qualified installer.**” [top of page 48: (2nd bullet of 6.13)]

“We estimate that 16 households on average share each communal aerial system so that, although 550,000 households could be affected by interference, only around 34,000 filters would be needed.” [p29: 5.37] [550,000 ÷ 16 = 34,375]

DTT receiver filters

- ① What is their size, *ie* what are their dimensions?
- ② Where in the chain of cables between which items of equipment, are they inserted?
- ③ How many does a home with multiple Digital Terrestrial Receivers (and TV sets) need:
 - a) Is it just one DTT Receiver Filter at point of entry of aerial into premises? or
 - b) Is it (say) two, three or four, DTT Receiver Filters, each inserted between a Digital Terrestrial Receiver (Set-top Box) and point of entry of aerial into premises?
 - c) For households using a communal aerial system, is it just one DTT Receiver Filter, on roof near DTT aerial, and householder does not need any DTT Receiver Filters?

/cont

4 **Communication & Information:** Letters will need to be sent to every household advising: ① when their DTT service will be stopped (by switch on of 4G) so people can plan their diary schedule accordingly; ② the Freephone 0800 number to ring to arrange appointment for a technical engineer to visit; ③ the hours MitCo's 0800 helpline number will be open: the nature of the problem indicates 8am to 9pm every day will be required; ④ enclosing a *comprehensive* factual information leaflet. Letters should be posted at least eight weeks prior to 4G switch on.

5 **Authorized Technical Engineers** How will Ofcom organise and prepare for the enormous increase needed in the number of qualified technical engineers to deal with the DTT receiver filter installations, and to ascend the roofs of individual houses and higher roofs of communal blocks of flats?

Currently, there are very few TV aerial installation firms. Such firms will be reluctant to incur call out expenses to carry out what (for them) is probably a simple quick job.

Their charges will be extremely high as a reflection of that reluctance. Their charges will also be higher than normal, because they will know their scarcity value at a time when masses of consumers will need them urgently to clamber on roofs to resolve difficult technical problems - some of which will require liaison with the MitCo helpline. [See next paragraph 6]

6 **Co-ordination: Liaison & interaction between** ① Consumer and ② MitCo helpline and ③ Technical engineer (and his firm) and ④ Mobile 4G base station company (if engineer deems network-based mitigation measures are required).

✱ Without it being completely clear who has ("owns") responsibility for co-ordinating every party likely to be involved in restoring consumers' DTT service until it works, consumers will be angry because of their lack of television for weeks on end, and be increasingly frustrated as they repeatedly phone MitCo helpline and get nowhere.

✱ Ofcom needs to devote greater thought to its plans to ensure that consumers who suffer loss of their DTT service, will not suffer further due to a lack of detailed planning which takes into account issues such as all those referred to above. Without absolute clarity, consumers will suffer from the inevitable confusion and conflicts which arise. Ofcom's plans must ensure operational and execution excellence by MitCo for consumers.

7 **Platform change** "We estimate that up to 30,000 platform changes may be necessary where DTT receiver and base station filtering do not resolve the interference issues." [p36: 5.81]

1 Virgin Media

Virgin Media two stores in London, 78 across the UK. Lengthy enquiry at a VM store as to how VM might, if necessary, replace my DTT television service elicited these facts:

- No need for my Lobgear Aerial Booster.
- Aerial cables nailed at skirting board level, passing through holes in three walls, and up and along top of doorframes and along ceiling/wall junctions to reach furthest sets, must be replaced by VM cables. **VM will not make good the damaged paintwork.**
- Not possible to record onto my video cassettes using my VCRs.
- Require monthly subscription (minimum one year contract). For consumers wise enough never to authorize third parties to access their bank account, and therefore unwilling to pay by Direct Debit (or worse, by Continuing Credit [card] Authority) VM permit payments by cheque and bank giro credit, subject to an extra charge. VM discriminates against consumers who are not internet enabled or otherwise need bills on paper. **VM warned their fees are very frequently varied, often increasing.**

- o In addition to one-off survey & installation costs, current monthly cost to provide the VM service approximating nearest to my DTT service - which is all FREE - is:

TV Package "M+" £12.50pm
+ 1st Set-top Box (Recording): **One-off £49.50** (to rent box) + £5.50pm
+ 2nd Set-top Box (Recording): **One off £99.95** (to rent box) + £6.50pm
+ 3rd Set-top Box (Non-recording): (Nil to rent) + £10.00pm
Non-Direct Debit Payment + £5.00pm
Paper billing + £1.50pm
Total: £41.00pm

ie Survey & Installation cost + £149.00 + Increasable £492.00 per year

2 Freesat

Freesat is a mystery. I cannot locate a 'Freesat' shop for detailed information on paper, face to face consultation and advice relevant to my existing equipment configuration, and to see a demonstration of and try out how its EPG and remote system works in practice.

All I've discovered is that Freesat is:

- o No subscriptions, satellite TV through a digital box, with circa 150 channels.
- o I assume ① Freesat, like Virgin Media, would not allow me to record onto cassettes on my VCRs? And ② the Freesat engineer would need to replace the internal three aerial cables extending through my flat, with Freesat cable?
- o Installation charge: about £175-£200.
Consultation document on page 35 [Table 5.4] shows Freesat costs as, for:
One TV set: "Installation and initial equipment charges: £165. Monthly charges: - "
Two TV sets: "Installation and initial equipment charges: £285. Monthly charges: - "
Three TV sets: "Installation and initial equipment charges: £405. Monthly charges: - "

Therefore, I assume the three TV sets £405.00 charge comprise two distinct parts, viz

Part (1) for installation of dish on roof of block?

Part (2) for the three Set-top Boxes?

If so, part (1) would be a cost to block management company (and be set against that year's service charge). But, part (2) would be payable by the individual resident.

I assume that having paid for the Freesat satellite dish on the roof, any resident could elect to receive their TV service via the Freesat satellite, subject to that resident paying the one-off charge applicable to the number of Set-top Boxes he needed.

If none of the DTT restoration methods work, then *subject to* verification of my above assumptions, and full information plus a demonstration of Freesat's EPG and remote, Freesat is indubitably a better platform than Virgin Media's cable, because with Freesat, once the initial charge is paid, there are no ongoing costs.

But, the Residents' Management Company Rules, derived from the Lease granted to each flat owner in my block, the Freehold of which belongs to the flat owners, state:

- "No external aerials may be erected for radio, TV or satellite reception."

It would require an amendment to the Rules for the Directors to authorize installation of a Freesat satellite dish on the flat roof, positioned well away from the roof edge so it was not visible from the ground. The current DTT aerial on the flat roof is not visible. The Rules have previously been varied, during the block's 40 years existence.

In view of the imminent possible loss of TV service in all flats reliant on the DTT aerial, it would be simpler for the Directors to grant themselves a dispensation from the Rules. If needed to exercised, this would benefit all flat owners, as those who subscribe to Virgin Media would find their flat easier to sell with television access not limited to "subscription only" - and they may choose to switch to the Freesat service.

Who Pays?

Consumers who lose their DTT service when 4G is switched on must not be out of pocket. This is why.

Consumers have only recently been forced to suffer the one-off costs of converting their TV sets to Digital Terrestrial Television. Their former Analogue service is being discontinued.

The government profited from the sale of airwaves/spectrum made possible by the forced switch from Analogue to DTT, and private mobile/telecom/TV companies bid for the rights to make money for their shareholders, and their highly paid directors.

Now with 4G, the re-run of a spectrum sell-off will be to benefit government and companies. For consumers, the difference this time is that:

- ① Some consumers will lose their DTT service permanently;
- ② Some consumers will only be able to acquire a television service by: (a) paying hefty monthly subscriptions indefinitely for the rest of their lives; (b) paying big one-off charges; and (c) their homes will be harder to sell when potential purchasers discover the totally free DTT service cannot be used there;
- ③ Some consumers will only be able to restore their DTT service by acquiring pieces of equipment, eg DTT receiver filters for insertion in their homes and/or on the roofs of blocks, and more sophisticated aerial installation systems);
- ④ All consumers who lose their DTT service (as above ①, ② & ③) will be forced to suffer without any television service whatsoever (there will no longer be Analogue to fall back on) until, for consumers within the groups ② & ③, their DTT service is restored.
- ⑤ The "old", "disabled" and "technically vulnerable" in groups ② & ③ will need technical engineers to deal with all aspects of supply, provision and installation of whatever equipment is deemed necessary by the engineer, using his specialised qualifications, knowledge and experience, to diagnose and solve the problem. Those services will cost money.

Indemnity

For consumers, the overriding principle of Ofcom's plans should be that of *indemnity*. The principle of indemnity is embedded as the core concept and practice of insurance.

The principle of indemnity means the DTT service the consumer had prior to 4G switch on:

- a) Must be restored one way or another, to provide the consumer with the same range, nature and quality of TV service as he had prior to the 4G switch on ... and ...
- b) Must leave the consumer in the same financial position after his TV service is restored as he was immediately prior to 4G switch on.

Nowhere in the consultation document does Ofcom offer clarity let alone reassuring certainty that DTT consumers affected by the 4G switch on will not have to pay for equipment, technical engineer services, nor indefinite monthly subscriptions.

In a finagling signal that Ofcom might try to force consumers to pay, on page 43 of the consultation document, in the heading of Table 5.7, in bold type, Ofcom states: **"no decision has been made on whether consumers should bear any of these costs."**

Incredibly, 'these costs' in the table include 'Platform changes'.

It's unlikely politicians would happily let Ofcom force any of their constituents to pay subscriptions to Virgin Media (effectively to Sir Richard Branson) for the rest of their lives, when those constituents previously enjoyed the totally free DTT service.

It is a disturbing example of Ofcom's "regulator capture" by mobile/TV/telecom companies that Ofcom has even considered forcing consumers - who currently pay nothing for DTT - to pay all the one-off charges *and* monthly, increasing subscriptions indefinitely for life.

In short, Ofcom puts a gun to consumer's head: "Pay up, or you can't have any television."

In autumn 2011, when Ofcom publishes a Statement, informed by the responses it's received, together with a further Consultation on certain (not identified) issues, Ofcom should make it indubitably clear that consumers will be indemnified, without imposition of any means test, so consumers will not lose financially from the deleterious effects of the 4G switch on.

How equipment will be paid for + How engineers will be paid

Throughout the consultation document Ofcom avoids facing up to the operational issues around *how* all the different equipment and technical engineer services will be paid for.

How the equipment and services will be paid for, is not same as *who* ultimately pays the bill. nb: Ultimately, the companies who win 4G licences, will have paid for *all* the mitigation costs.

To illustrate the issue: One method could be for consumer to pay for the equipment and technical engineer's services, and claim reimbursement from MitCo; another method could be for MitCo to pay technical engineers for their services and the equipment (they) installed.

The Statement or further Consultation in the autumn needs to settle such operational issues.

[end]

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