Responding to CITIZENS, COMMUNICATIONS and CONVERGENCE

Five years have elapsed and now Ofcom begins to look as if it might seriously address the different regulatory priorities necessary to take forward the interests of the citizen. This omission has not been bridged over those five year's due to Ofcom's robust instinct to shape its staffing to reflect a lower priority bordering on disdain for the representation of citizenship.

The Institute of Local Television has characterized evidence of a citizen demand for television to Ofcom in its responses to consultations made since 2004. For this reason, 1.6 is simply impossible to believe.

> 1.6 In practice, the citizen focus has constantly informed Ofcom's thinking since the organisation's inception, whether in seeking a balanced approach to spectrum allocation or public service broadcasting. We have sought to ensure that our decisions are in the interests of citizens, as well as consumers.

The interests of citizens are not those of consumers – especially in communications markets. They are often at odds. A basic if universal service is not sufficient as 'public service' and arguing for plurality with the BBC at all levels is hollow if – as we find – ITV is allowed to contract regionally without replacement. Broadband is not good enough – it is scarcely widely available in TV use. Ofcom's objective has been to encourage and enable operators of new and commercial services to choose the citizens they would like to reach converting them by selection into potential consumers of services on cable, high speed broadband or commercial multiplex.

Many citizens are being deprived of commercial mux services as a result of Ofcom offering the operators a choice to select up to 220 transmitter and relays sites (from 1152) for delivery of their channels. Within that number the operators chose only 81 sites.

While the spectrum used for commercial services remains a public asset new public services can still be introduced on a universal scale. However introducing auctions as planned to determine access to spectrum will encourage an aggregation of spectrum to suit commercial efficiency offering services to perhaps 60-70% of the population most readily reached at lowest cost to the operator per household reached.

The anticipation of commercial economic return has Ofcom demonstrably outweighed the merit and evidence of the citizen's expectation to receive an equality of service irrespective of location in the use of the digital dividend. For the future of public television Ofcom has still to hazard publicly how an unequal access to terrestrial digital channels that the regulator is introducing will play out as a demand for a two-tier license fee.

It is expected that 53% of Scottish Borders viewers will be deprived of commercial channels on Freeview. This figure is probably still consistent with Ofcom's published figure of 90% coverage overall because 90% was floated as a UK-wide figure. This is one of the problems with centralized economic regulation. To understand impact we need to start from the local experience and reception of services and work upwards, not the way that Ofcom starts aggregating percentages to allow larger numbers in easier to

reach urban areas to outweigh those repeatedly missing out in less advantaged locations. Ofcom's regulation has been designed to let operators free – not to secure equality of service. The consumer of the service offered cannot be squared with the citizen of the service not provided, these are not the same understandings, and they use a different language and have different values as well as expectations.

In fact Ofcom's requirement that publicly funded broadcasting be 'widely available' and no longer universal is entirely consistent with transmitting (say) ITV to England while ignoring altogether Wales Scotland and Northern Ireland.

The actual coverage of the commercial muxes will exclude a population the size of Scotland and Wales – but it will actually be a dispersed localized and oftem rural population without the 'regulatory responsibility' of national or local accountability to intervene and reconfigure spectrum or broadband.

In practice the brunt of poor and uneven communications delivery falls in the same places whether for cable, broadband or (now) DTT (and auctioned spectrum) – repeatedly disadvantaging the same rural households across all three communications platforms for which Ofcom is responsible and for which light regulation amounts to engineering service exclusion for economic advantage. Ofcom by its operational criteria, its preference for economic modeling and market assumption is constructively and in many key places ideologically 'anti-citizen'.

If the citizen is not enabled to drive communications policy to address current and future disadvantage then the idea of 'citizen interest' becomes the hollow concept it has become for Ofcom; something twisted, debased and impoverished and characterized as a safety net to support what the markets cannot supply. I would suggest 'citizen' has its own cultural as well as political meanings and that (metaphorically) the citizens should mount a defence of their distinction from their interests absorbed as consumers.

Through its research, Ofcom's viewers have made known their preference for a universal public service local TV and yet Ofcom has refused to accept that this public and citizen demand should be reflected in allocations of spectrum to deliver the services the viewers understand in public and universal terms. Ofcom lays the problem with the embrace of PSB at the DCMS's door while the DCMS say they take Ofcom's advice on these matters.

Ofcom tries to pass local TV onto broadband as 'local video content' while local news on broadband fails to secure public approval (see the Second PSB: Phase 1 IPSOS-MORI and other studies). Ofcom does not offer local DTT for those who've said they're not interested in computers for news or who have poor broadband connections. Why?

> 1.7 First, it is important to ensure that all our decisions are consistent and transparent. This includes being clear about how our reasoning is affected by our statutory duty to further the interests of citizens and consumers. Where there are tensions between citizens' and consumers' perspectives, those tensions need to be exposed if their resolution is to be judged rigorous by our stakeholders.

There is an urgent need now ahead of a new Communications Bill to unravel the limitations Ofcom has placed on recognizing viewers and to question Ofcom's purpose to substitute the views of citizens with those of consumers.

As much as anything Ofcom's malaise follows an early pre-formation institutionalization of a market led view constructing a dominant almost exclusive monopoly ideology for communications regulation. Why so many in senior positions at Ofcom from the Treasury and rail-privatisation? Unless selling spectrum by auction were somehow an implicit conclusion of the DDR. No one at Ofcom questions the lack of commercial evidence and scientific merit in the economic model of spectrum auction. It lives and breeds entirely on a bankrupt faith in markets to deliver. Ofcom moves auctions forward regardless of the lack of public enthusiasm for this model and the findings of public research and outside evidence found against this proposal – but provided in public consultations conducted by staff *sharing that ideological background* that auctions will go ahead!

The view that the Treasury is not driving spectrum auctions and secondary markets this is downright dishonest. Yes Ofcom is independent – but it is filled to the brim with Treasury stakeholders and privateers: it is incapable of thinking independently because it shares Treasury and privatisation beliefs!

The question I asked Ofcom early on (2004 or 2005) was who was being employed with a local television background to develop within Ofcom the national public plan for local TV to be universally available the DCMS had said was in hand in 1999 and that Ofcom was then asked to provide by Lord Macintosh in 2004?

No one.

If there is no one employed in Ofcom with a counter-viewpoint on this one issue – was this lack of breadth endemic across all issues? A paper commissioned by the editor of the Media Literacy Bulletin to provide an alternative view on Ofcom's approach to media literacy was rejected because it did not represent Ofcom's thinking!

Ofcom has become trapped in its own monoculture. Caricaturing its staff working on public service broadcasting as the 'fluffy department' sums up the hegemony of those at Ofcom pointing the good ship enterprise determinedly one way to become as maneuverable as a tanker blind to the rampaging storm at its tail.

Ofcom only recently began to consider the needs of the nations and localities in its public service broadcasting. I know because I attend the stakeholder meetings and directly or with others respond to the consultations. Keeping an eye on Ofcom is a full time job. Only after its DDR revues has Ofcom acknowledged that in reality the amount of spectrum in rural areas and in particular in Scotland outweighs that available in the south and more urban areas and so, perhaps, something different than a metropolitan one size for all model might be considered. There is certainly need for a variable model of spectrum use – to address with the extra surplus those needs that have been ignored by pushing the market in spectrum as if it were a material investment like cable or broadband.

This earlier policy to overwrite capacity to satisfy short term commercial and company ends and should inform the work on how the digital dividend spectrum should be used – in models of efficiency that address spectrum use to public and infrastructural demands area by area, transmitter by transmitter. But the monopoly of the 'national broadcasting view' even as the 'commercial view' focuses on finding commercial efficiencies not the

efficient use of spectrum, or the basis upon which Martin Cave publicly sold his conversion of spectrum regulation out of public and into private hands. To halt Ofcom communications regulation must be devolved to include state, nations and localities.

Ofcom's thinking in linear consultation boxes has let the PSB reviews – the assessment of future public service broadcasting - drift behind its spectrum auction consultations so as to capture the future for technocratic commercial opportunism – on the excuse of providing for innovations yet to be imagined (innovations without evidence of support) - rather than to imagine a future constructed to serve social and political objectives. If spectrum is sold and distributed to achieve commercial ends, cherry-picked and abandoned willy-nilly, how can the future include new public service broadcasting?

Ofcom needs to ensure that public service content is configured to UK, nation as well as local scales within which as citizens we might collectively make sense of the world by democratic use of these tools of representation. Regardless of communications platform universal access remains crucial and no regulator should claim a State monopoly unless securing universal access is its fundamental objective. This – I suggest – will always put citizens before consumers in public regulation.

> • The internet is now a fundamental part of the communications landscape. It is becoming an increasingly important way of supplying content that, in the past, was available only via broadcast networks. Changes in the way that content is supplied and consumed mean that the existing model of content regulation will need to evolve. Devising means to respond to citizens' interests in this area represents a considerable challenge.

But the Internet is still not universally available and as the IPSOS-MORI research for the Second PSB: Phase One showed broadband is not wanted for delivering news at local, regional or national/UK scales.

> • Telecoms networks are evolving too. Extra capacity may be needed to enable consumers and citizens to enjoy the benefits of innovative services and regulation has a role to play in ensuring that network operators have the incentives to invest in upgrading their networks. Related to this, there is a growing debate about how operators should manage their networks and whether they should be allowed to prioritise certain types of traffic.

Without regulation the commercial incentive is unrestrained in its desire to overwrite the existing network(s) and to seek out customers with new services, to serve the compactly populated accessible areas and to ignore those on the edge of digital distribution. In other words, commercial benefit is encouraged in the form of short-term gain by cannibalizing the exiting largely state built and publicly funded networks of telecoms and TV transmission. We have a universal TV network in place but its universal use will eventually be threatened by services competing for 80-90% of viewers who only need to use 81 of its 1152 transmitters and relays. The burden of payment to maintain universal use will fall of the smaller numbers of services, with reduced numbers of viewers, using the complete network. Ofcom is the Dr Beeching of television.

Without equality between 'citizen' and 'consumer' the voice of the citizen – including those without an opportunity to consume - does not carry equal weight with the potentially satisfiable consumer. Ofcom addresses the consumer on behalf of the

operator – the citizen with no access to service or control over distribution is doubly disadvantaged.

The citizen's problems are of Ofcom's making. Ofcom's entire methodology needs to be reversed – to regulate in support of achieving equality of access regardless of location not to offer operator benefit to select consumers for their commercial convenience.

> 2.17 Ofcom has recognised, therefore, that citizens' and consumers' interests are different. We now want to build on our thinking to date and provide greater certainty about how these interests should be defined and our role in furthering them.

To achieve 2.17 Ofcom will require a methodology to identify and better value citizen interests alongside consumer interests. No one's saying this is easy to assess. But the freedoms for commerce to experiment should not be denied those seeking a social variation of the consumer model we've grown up with. Who can say whether a technological fix or a social adjustment is necessary when consumption has become both an economic and environmental issue?

A balance must be struck that allows for greater freedom in working things out, for expressions of community and of localness, for local solutions to be discussed using communications under local control; for local identity, nationhood and participation to be valued as well as evidence of past personal purchases or assuming general consumption should determine likely future patterns of use. If we merely assume we can make the future out of evidence of the past we will repeat the fraudulent version of freedom that Ofcom has been as guilty in selling as the financial sector.

I suggest part of the process needed to recognise the stature and capacity of the 'citizen' requires Ofcom and Government to devolve regulation to national and local scales for services that operate primarily at that level that have no State PSB remit. That is "devising means to respond to citizens' interests in this area represents a considerable challenge" but one that Ofcom is not best placed to recognize let alone deliver in its present unitary form.

The really important shift will only come about when Ofcom recognizes – or the new Communications Bill recognises - that citizenship functions on several scales and that a single approach – to reach a maximum number of households or users UK wide overrides distinctive citizen responsibilities and loyalities to where they believe most strongly they 'live'; the areas where news is important but equally - as a result of being better informed - where citizen influence can be exerted to correct misplaced or duplicating service provision applied on the larger either Statewide or commercial scales.

MAKING THE CITIZEN'S CASE FOR DEVOLUTION AND SUBSIDIARITY

Under the principles of devolution and subsidiarity England, Scotland, Wales and NI would have responsibility for terrestrial communications services for reception and transmission internally. A third less formal local tier supervised by broadcasting trusts - comprised of voluntary bodies - would oversee wireless communications requirements that benefit primarily the region/city or local audience and subscribers. Mobile phones and other services without geographic focus would be overseen by a combined

representation - transferring responsibility up from local area, through nation to state.

The devolution and subsidiarity of spectrum management follows introduction of state-wide public service broadcasting with the as yet incomplete high-speed broadband network. Each nation would license nation scale services including focusing spectrum use to address any real or perceived state-wide deficit. The remaining spectrum would address as first priority local area demand for service.

After state, nation and local public service requirements are fulfilled surplus spectrum might be leased by the local trusts and nation agencies to incoming commercial services (of a large but not state-universal scale and without PSB value). Incoming services would be licensed according to demand in the nation and locality. The leasing of spectrum by nations and local areas would provide revenue to support nation and local services.

Satellite services would continue to operate across frontiers although increasingly influenced in what they carried by the greater critical mass of nation and local service this regulatory model would encourage.

The regulatory structure would conform to European principles for cross border terrestrial and satellite transmission while transforming - in the light of devolution and subsidiarity - our understanding of the scope of public service broadcasting by introducing equity for local civic as well as nation demands.

I INTRODUCTION

Over the last three decades public service communications have been transformed from their unifying social and political purpose into a safety net for those out of reach of commercial services.

After securing public service coverage for television in the 1970s there were two options for the British Government:

> The first - to extend public service broadcasting and communications to address 'national', 'regional' and 'local' 'publics' and to encourage a more accurate and relevant representation of the two lower tiers of civil society, their cultures and governance [1].
>
> The second - for central control to remain so as to encourage the commercialisation of broadcasting and communications and to defend for commercial benefit the most favourable parts of the public infrastructure.

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[1] Regional TV boundaries do not coincide with civic areas. The relevance of 'regional' news and cultural representation has long been a bone of contention with viewers, who feel they are not represented so much as overwritten by the 'arbitrary' scale of regional TV. (See Section Two: 'Local identity and place on television', in Rushton, D *Local Public Service Television: Local identity and Spectrum Rights*, Institute of Local Television, (2008) Section One: 'Local Television Futures' has been re-drafted for inclusion here as evidence (but see http://www.ofcom.org.uk/consult/condocs/ddrinterleaved/responses/?lang=cy - to download both chapters) See also research conducted for the Scottish Government by TNS System Three, *Public Attitudes to Broadcasting*, which can be downloaded from http://www.scottishbroadcastingcommission.gov.uk/news/publicviews

Rather than to protect the public against fragmented and uneven access to communications, policy would be turned 180 degrees to defend the commercial operators against local and national interference [2].

The view across Europe

In Europe the choice to localize regulation has largely been organically achieved and the delegation of broadcasting responsibilities to lower tiers of governance approached as 'common sense'. European cable was introduced throughout the 1980s in partnership with local government. Here contra-deals were struck for local channels to access commercial cable in exchange for cable having access to town and city streets. In Northern Europe it was cable not terrestrial or satellite that became the de facto platform for television distribution (with typically 80% homes using cable for TV by the 1990s). In Germany regulation of local and regional terrestrial TV as well as cable services devolved to the Lande while for Spain delegation of regional services and below was made to each autonomous region. The German Lande receives a small percentage of the license fee to support community and open access media disbursed at the discretion of the area's communication commissions. In Spain a regional tier as well as more local town, city and rural tier of TV broadcasting emerged divided up among community, commercial and municipal stakeholders, giving rise to some 1000 local TV stations in all.

In the UK cable franchises were also initially borough and city in scale but because of weak commercial interest operators were permitted to abandon local area completion targets and to merge franchise areas, to ignore delivering equality of service across their local universe and to aggregate customers across civic boundaries instead.

As broadband was introduced it tended to follow the distribution pattern of cable, to seek customers near digital switches where close proximity offered commercial efficiencies without needing to build new infrastructure. The UK may now have reached the limits of its capacity to deliver higher speeds on the 'twisted copper pair' of the old telephone network. Meanwhile the roll-out of cable and broadband together following a largely unguided commercial path have established a pattern of economic distribution that is to be anticipated for the aggregated wireless digital services that will follow, those to be introduced with spectrum released from digital switchover.

By a process of stealth the original beneficial objective of the British state gathering together local spectrum for UK-wide distribution of public services, offer equality of access to common programming has been transformed into the state's promotion of commercial benefit to operators encouraged to cherry-pick or select the most accessible viewers or subscribers.

II SPECTRUM & FUTURE BROADCASTING

Broadband and cable distribution obscures the once civic scale of the cable franchise area, and companies compete across metropolitan areas to secure the most accessible subscribers, regardless of any consequence of unequal access to services. The

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[2] A proposal to develop three tiers of public service broadcasting and regulation to coincide with administrative areas was first made in a booklet circulated by the John Wheatley Centre in 1995 titled *Does Scotland need a broadcasting policy?* suggesting devolution of regulation for the next stage for public service TV and radio services, those not offering a UK-wide service.

Government compromised the civic objectives of cable to secure investment in the 1980s and in a reckless recovery from over-confidence that cable would reach all under private effort undermined cable's distinctive 'local' purpose.

Later regulation in 1990 was realigned to tempt the mostly US operators to invest without the burden of interference from local authorities, removing the requirement for cable to address and reflect each local civic sphere (Rushton, 1994:43-44). By the 1990s in other northern European countries cable had secured almost universal reach among town as well as city households. In turn, those households in the UK without cable in their streets became less likely to benefit from the competition driving faster broadband speeds. Without a regulator addressing constructing service deficit, companies continued to over-supply offering competing services to the same subscribers. Recently the communications regulator Ofcom has found cable broadband availability to be highest in London,

> where 61% of households could receive cable broadband services, and lowest in Wales, where less than a quarter of households (23%) were able to [receive]. Availability was higher in urban areas, where over half of all households (52%) could receive cable broadband services, than in rural areas where less than a quarter (23%) could do so (Ofcom, 2007:5.1.1.3).

These findings should not be dismissed as unforeseen but as the outcome of policies designed to help operators secure the more accessible customers, by abandoning those where it was necessary to build new infrastructure (Rushton, 1993:169-170, Rushton, 1994:44, ACTO 22, 2006). Ofcom's recent attempt to further enhance competition, local loop unbundling (LLU), has enabled broadband companies to access BT's digital exchanges, finding enthusiasm to use those serving large numbers of households and businesses, resulting in "LLU availability in urban areas [at] 78% compared to 27% in rural areas" (Ofcom, 2007:5.1.1.4).

Addressing the uneven and impoverished infrastructure arising from light-touch telecoms regulation Kip Meek, formerly of the Ofcom Board and now Chair of the Broadband Stakeholders Group (BSG), reported on 16 April 2007, that

> broadband is the critical enabling infrastructure of our modern, knowledge-based economy and is an integral part of many people's lives. Yet … the UK's current and planned broadband infrastructure may not meet the future needs of the most intensive users and we cannot assume the market will continue to deliver the ever-increasing bandwidth that many content providers and users increasingly expect (Broadband Stakeholders Group, 2007).

In their coverage of the Broadband Stakeholders Group the BBC reported BSG favoured public intervention, "Government should also explore models of how it might get involved in the creation of next generation networks to ensure that all parts of the UK get treated equally" (BBC, 2007). So now, after twenty years of force fed privatisation by regulators up to and including Ofcom, we are invited to return full circle, away from the certainty of Government promises in the 1980s that commercial markets would drive communications infrastructure and its benefits. The belated realisation is that Government intervention will be necessary to secure the communications infrastructure to prevent disadvantaging the more remote economic and cultural communities.

The electromagnetic 'wireless' spectrum has one distinct advantage over the 'built' infrastructures of cable and wired broadband: its availability has no regard for

demographics, geography or commercial intentions. The relatively recent idea that markets offer a better and less wasteful regulation of this spectrum than central Government at Westminster has been promoted largely by Professor Martin Cave (2002). Support for markets as communications regulators for spectrum is presented as offering positive social as well as economic outcomes for national (UK) benefit. “Trading [spectrum] will give firms an incentive to husband the nation’s resources of spectrum and direct it into the most profitable uses” (Cave 2006:6). Yet, leaving the selection of possible consumers to communications suppliers will continue to ensure that some areas receive poorer services than others. This relative poverty remains compounded by poor motivation, the positive disincentive to build out infrastructure, focusing further competition on price for the already largely over-served customers. In particular, it is being proposed by Ofcom that digital spectrum should be configured into commercial packages for auction to encourage operators to access the most easily reached communities, setting aside the less commercially useful and more fragmented spectrum for trade in secondary markets. These are the areas requiring more transmitters and relays to serve viable populations.

Cave concedes that the public have a legitimate interest in retaining access to services that spectrum continues to provide, suggesting the Government’s “key strategic broadcasting goal is that public service broadcasts should be available to everyone, as now, free at the point of consumption” (Cave, 2002:37). Yet Ofcom’s interpretation of public service broadcasting requirements from those receiving public funds, no longer seeks to ensure universal provision. After replacing the ITC in 2003 Ofcom was quick to reassess the scope of public service broadcasting and withdrew the universal obligation to reach all. Instead Ofcom now encourages broadcasters to make their channels “widely available – if content is publicly funded, a large majority of citizens need to be given the chance to watch it” (Ofcom, 2003).

Taken together cable, high-speed broadband and the new digital wireless prospects arising with spectrum released as analogue is switched off will see commercial and publicly funded services being regulated by markets that will significantly over-serve the same populations in some areas, leaving others relatively poorly served. This will allow operators to compete on price and reduce further the need to build out networks beyond the potentially very flexible interpretation of Ofcom’s ‘widely available’ (ACTO 22, 2007). Meanwhile, terrestrial public service television in both analogue and digital forms is expected to reach almost all households (98.5%), but perhaps will only continue to do so until commercial public broadcasters weigh up the impact of heightened competition and consider abandoning the ‘universal’ obligation in favour of the lower more ambiguous achievement of ‘widely available’ set by Ofcom in 2003. The numbers of digital transmitters and relays required to reach 90% of UK households is only 80, compared to 1152 to serve 98.5%. The introduction of terrestrial high definition television (HDTV) may be the tipping-point at which commercial logic excludes universal delivery for the terrestrial HDTV public channels including those receiving public finance. As an alternative to digital terrestrial delivery, satellite offers as good a level of coverage while satellite is far more spectrum efficient in delivering large scale and pan-national channels. However, satellite is far less effective and very expensive for the delivery of local and regional channels. It is missing local and regional (nation-scale) channels, those able to address smaller geographic civic communities, that are best able to use terrestrial spectrum most efficiently.

As the Government’s principal adviser on spectrum trading, Martin Cave did not

demonstrate how communications markets would improve spectrum efficiencies over regulation. In linking 'improved efficiency' with commercial incentive, Cave and Ofcom have effectively conflated the objective to achieve an 'efficient use of spectrum' with 'spectrum's commercially efficient use'. A real test of spectrum efficiency in the public interest is whether or not specified and declared public objectives can be achieved by commercial means, following the removal of public intervention, planning and regulation.

Cave writes in his Foreword to the March 2002 *Review of Radio Spectrum Management*, "UK society derives unquantified value from spectrum use by a wide range of services, from defence to broadcasting, whose reasonable demands for spectrum have to be accommodated within any spectrum allocation regime" (Cave 2002:14). Although Cave includes an 'unquantified value' for society in this analysis, he provides no evidence from public stakeholders for this 'reasonable demand' and so it seems a hollow unargued common sense alongside his commercial emphasis associated closely with one interest group, "guided by many of the responses which I have received, particularly from commercial organisations" (Cave 2002:6). The public goals for communications that have been characterised as our common interest in spectrum have, till now, been represented through Government. Cave sets out to recast these interests as best served as indirect benefit achieved through greater commercial profitability and innovation. Cave is extremely confident that commercial dynamics can replace public intervention, suggesting that public service communications will only remain distinctive until market mechanisms mature sufficiently to satisfy all needs, and

> the review recognises that there will remain a number of public services for which spectrum is a vital input and for which, in the absence of a fully fledged spectrum market, the current regime of reserving sufficient frequency bands for the delivery of these services should continue through the medium term (Cave, 2002:35).

The potential economic benefit to the public and the nations from an open spectrum commercialisation is that greater public spending will result from larger corporation tax revenues and Treasury receipts made by companies using spectrum to increase their profitability. These indirect benefits are not to be entirely conflated, at least so far as Cave is concerned with the heavily publicised Treasury windfall expected to arise from auctioning spectrum. Cave is in fact only too aware that his motives in writing his review for the Treasury might very easily be misconstrued:

> One of my abiding concerns throughout the preparation of the report has been a widespread perception that spectrum charging is simply a device to raise money for the Government from private sector bodies or organisations such as the BBC. Revenue raising has not been an objective which has governed my recommendations (Cave, 2002:9).

Cave assures the reader his principal objective is not economic but to improve spectrum's (technical) efficiency in use, and that a more efficient use of spectrum will itself provide long-term economic advantage for the UK. Cave's principal idea is to encourage commercial flexibility to enable innovation, making a distinction between spectrum's 'technical efficiency' and 'commercial efficiency' as favoured means to achieve this objective. Yet the evidence of commercially driven cable and broadband does not support commercial packaging and reduced intervention for spectrum. Although Cave distinguishes technical efficiency as the objective Ofcom seem less interested in making this distinction or even in exploring a range of practical possibilities for constructing communications regulation along economic lines. In responding to

Ofcom's *Digital Dividend Review*, in March 2007, Ofcom's Spectrum Advisory Board (OSAB) caution the regulator that "UK competitiveness should at least act as a brake on an excessive zeal towards pure spectrum auction approaches" (Ofcom's Spectrum Advisory Board, 2007). If the public benefits of spectrum trade were primarily to become Treasury receipts then there is surely a need for discussion in the nations and economic regions of the UK on the merits of devolving regulation of communications further away from each nation's capacity to intervene in their economic interest. Not least granted regulatory responsibilities those less well advantaged areas would be able to balance spectrum use against broadband deficit and enhance their regional contributions to GDP through increased economic and creative spectrum-use activity, operating to locally sensitive and less large-scale commercially obvious or excluding ways.

For Cave, spectrum becomes over-simplified in being characterized as a raw material for manufacture, "looking forward spectrum is an essential raw material for many of the UK's most promising industries of the future" (Cave, 2002:11). Meanwhile a contrary key perspective from 2002 comes in a paper setting out to inform the Treasury on international spectrum agreements. Martin Kellaway of the National Statistics Office advises the Treasury "by international convention the spectrum is owned by the central Government of each country, and that ownership cannot be transferred" (Kellaway, 2002). In Germany and Spain local broadcasting regulation and licensing of broadcasting has been devolved to regional administrations.

In spite of Kellaway's counsel, the Government through Ofcom have conceded the principle that state control can be transferred, although they have been reluctant to explore administrative delegation of responsibility to the lower tiers of public administration. Having conceded the principle of transfer there seems no reason why the nations and local areas do not counter-claim to take administrative responsibility from central Government – if not title to ownership – and to regulate spectrum to encourage services within their own administrative boundaries.

The state's principle duty of responsibility is to regulate spectrum use at international borders, while a more intuitive narrative explains the public's consent to approving spectrum's accumulation by the state and subsequent monopoly regulation – short of devolution to markets. This narrative explains the historic spectrum plan for the UK as being reliant upon common consent that spectrum would be used to serve mutual public objectives.

The state first annexed wireless for military and defence and later justified its retention of monopoly to prevent a commercial free-for-all for spectrum use (for radio) skewing a shared principle of common access. In this central Government justified monopoly in order to secure an equality of provision through universal delivery. This monopoly embodies a unifying and clear public purpose, as a compact between the state each citizen supporting the accumulation of local instances of spectrum use in order to deliver a mutually beneficial combined national outcome: public service broadcasting as public good.

In proposing to cede spectrum regulation itself to markets and commercial decision this historic bond to give up spectrum for common purpose is broken and, at Cave's suggestion, Government are to step aside in favour of a supposedly more effective and 'technically efficient', if unproven and untested alternative, the management of spectrum by markets.

The foundation and acceptance of spectrum trading is still far from clear. Speaking during the January 2006 House of Lords Select Committee meeting on the BBC Charter Review Lord Armstrong of Ilminster said: “As I understand … the [electromagnetic] spectrum is the property of the Government. I believe our access to it is controlled by international agreement. I would be grateful if you could confirm that” (House of Lords, 2006). Cave replied: “I think there still may be some residual uncertainty about precisely to whom the spectrum belongs”. After an exchange of letters in the Scottish Parliament Chris Ballance MSP asked Deputy First Minister Nicol Stephen, “… who, if anyone, owns the electro-magnetic spectrum in Scotland, as distinct from who manages it?” Nicol Stephen replied: “The [Scottish] Executive’s understanding is that there is no defined ownership of the electro-magnetic spectrum” (Scottish Parliament, 2006). Stephen’s stresses that it is Ofcom’s role to ‘manage spectrum’. Can that management be handed over to commercial trade and if so what is being traded?

The House of Lords (House of Lords, 2006) invited one of Professor Cave’s colleagues Dr David Cleevely to contribute evidence on the proposals to create a spectrum market. In contrast to Cave, for Cleevely spectrum is not ‘scarce’ but a significantly under-exploited resource, for broadcasters and for other potential users of spectrum. Like Cave however Cleevely is far from convincing in providing the Lords with evidence that technical efficiency gains follow from market regulation, instead he urges the Lords to accept that people (other than Government) “might take the right kind of decisions in order for innovation to take place”.

Here Cave and Cleevely are united in suggesting – no matter what spectrum is, whether scarce or abundant - central Government has failed in its responsibility to safeguard spectrum and to encourage sufficient innovation, inhibiting good management and effective creative use. Yet neither witness provides this Committee with any evidence that better decision making will result in a more technically efficient use of spectrum resulting from commercial freedom to regulate use by trade.

In returning to consider spectrum management in 2006, although Cave continues to characterise a commercial engagement with spectrum as the means to achieve spectrum’s technical efficiency he emphasises that it is “technically efficient spectrum use [that] commends itself as a self-explanatory benefit. Indeed, technical efficiency may rationally count as the leading factor in spectrum allocation decisions” (Cave, 2006:4).

This is an important point. Cave is characterizing commercial means as a preferred candidate to central Government to secure technically efficient spectrum use. It is evident that ‘technically efficient spectrum’ is the priority and taken together Cave’s view is merely an hypothesis that technical efficiencies will result from a commercial interest in retaining minimal surplus of spectrum as ‘raw material’ on the balance sheet. It is far from evident that there is a commercial incentive to dispose of inexpensive spectrum and if expensive not to retain that spectrum until the market improved. It is hard to see why spectrum left-over in low population areas would not be abandoned, not traded at all and since not part of a public plan there would be no cross-subsidy of revenue from easy to reach audiences or subscribers redistributed to support services to those less accessible.

Just as it is possible to imagine under optimum market conditions commercial efficiency encouraging technically efficient use of spectrum it is also possible to imagine in

stagnant markets and for spectrum accessible to only a few no link that would ensure or guarantee commercial regulation will drive spectrum's technically efficient use. There is simply no evidence that commercial incentives will secure technical efficiency – or deliver *the leading factor in spectrum allocation decisions*.

If central Government regulation is as Cave suggest poor and that spectrum lies unused this is not a weakness shared by public administrations. Some administrations in the UK have not had control of spectrum or its regulation. Certainly central Government succeeded in securing the universal outcome and having achieved that has – perhaps – lost sight of what to do next, forgetting that in securing 'local spectrum' for 'national purpose' devolution to determine use closer to transmission and reception is one possibility. Cave, Government and Ofcom do not provide any evidence to suggest devolved regulation to a more localised administration would be less or more efficient than commercial operators trading unwanted spectrum under market conditions to ensure efficient use.

One of the objections to Ofcom in particular as an evidence based researcher is that their it is their instinct rather than evidence that seems too easily to coincide with the interests of operators, encouraging a simple treatment of spectrum as if it were a raw material or property and indifference to the priority 'technical efficiency'. By suggesting spectrum to be 'concrete' it is easier to imagine the transfer of spectrum itself to represent the transfer of rights to use, and to involve the mechanisms of by auction and market as if spectrum were a raw material or material good. Yet as Kellaway suggests above the ability to transfer spectrum from government is clear from an international standpoint, as echoed by the Lords in questioning Cave and Cleevely (also above). There is a very strong case for suggesting that thinking of spectrum as a material good at all amounts to a category mistake, because spectrum is not a material thing.

As David Goldberg explained in a discussion arranged by the Cross-party Culture and Media Group of the Scottish Parliament,

> think of the [spectrum] issue in terms of action (verb) not substance (noun), think in terms of spectrum use; there's no Platonic ideal spectrum lurking like the shadow in the cave (!). Spectrum classification is a human construct; it doesn't exist in nature. Radio communication is people communicating using emitters and receivers: the activity of using emitters modulating at a specific frequency and receivers tuned to receive the emission to enable/ facilitate communication (Goldberg, 2007).

Goldberg's understanding of spectrum as 'action' rather than as 'substance' seems far more consistent with Cave's priority to assess 'technical efficiency' in spectrum use. As an action of transmitting and receiving spectrum use is identified as a *conjoint use* measured in its deployment. And yet the economic or commercial case for spectrum regulation – the idea that spectrum might be 'owned' and then 'transferred' – requires Ofcom to separate the 'transmitting' from the 'receiving' responsibilities in the activity of spectrum use. This serves to discourage an understanding of identifiable or evidenced technical efficiencies based on the experience of use (that is upon particular actions of transmission and reception).

Without any doubt spectrum value for society and commerce lies in its use, but its successful use requires reception. For broadcasting for each transmission spectrum is transmitted at one point and received at many. Spectrum use involves not just the

transmission but the successful reception of the signal. If a broadcast signal is transmitted and not received at all or by a small percentage of those able to receive it then this spectrum is being used wastefully. Furthermore this particular transmission excludes other simultaneous uses in that area and location – instances of transmission and reception where a greater percentage require reception of an alternative use. As well as securing spectrum's technically efficient use Ofcom's claim is that it is an evidence-based regulator. To establish technical efficiency of spectrum (here for broadcasting) Ofcom needs to apply transparently a common measurement of assessment.

For television the TV transmitters and the installed base of domestic aerials together with the TVs as receivers comprise the transmitting and receiving elements required for transmission and reception. The operator involved in transmission and the viewers engaged in reception are necessary partners in assessing whether or not spectrum is being efficiently used in its broadcast role.

Given Ofcom's preference to focus upon the interests of the operator (transmitter) what is particularly interesting is that the economic investment in broadcasting favours the invested capital of viewers and listeners as the major stakeholders, not the operators. Householders buy and install their own TV receiving equipment but through the requirement to hold a TV licence provide annual investment in building and maintaining the broadcast transmitters, most recently in replacing the analogue transmission network in preparation for digital switchover [3].

The license fee makes a substantial on-going contribution to the network of transmitters and towers required for broadcasting. Yet by Ofcom's sleight of hand in objectifying spectrum and by exclusively favouring the operator as spectrum's principal stakeholder the public's role as viewer-investors – which is critical in determining spectrum's efficiency and paying for transmission - is overlooked.

A simple equation expresses technically efficient spectrum use as the difference between the number of television viewers able to receive a channel and the number actually watching or recording that channel. This satisfies the objective to provide evidence of efficient and wasteful spectrum use, or Broadcast Spectrum Efficiency (BSE). BSE equals the product of Numbers watching (Nw) and Minutes (tv) of viewing over the product of Number of licensees in the transmission area (Nl) and Minutes of broadcast time (tb).

$$BSE = \frac{Nw \times tv}{Nl \times tb}$$

It is this formula, not Cave's economic opinion or Ofcom's specious idea that efficient use of spectrum can be controlled entirely by the operator or supply side, that provides the measurement for spectrum's technically efficient use. A television signal that is transmitted but not watched at all is the most inefficient use of spectrum and the

[3] We might conservatively assume 25m x £200 TV sets/aerials as capital investment in reception plus percentage of the £139.50 annual TV licence fee spent on transmission upgrades. Currently c.70% households are receiving analogue or digital Freeview on first or second TV sets with their TV signals conveyed using the transmitters and relays of the national network.

efficiency of use increases as a percentage of those able to watch are found to be watching. BARB provides an indicative figure for each national television channel's technically effective use of spectrum on a weekly basis [4].

As the priority for Cave this formula provides a measurement of spectrum's technical efficiency in broadcasting use, ensuring that independent assessment can be made of the extent of waste and satisfaction in each instance of spectrum's use.

Several digital terrestrial TV channels are rarely watched by more than 1% of possible viewers. Many of these are commercially efficient operations – and on Ofcom's blinkered view these commercial services are spectrum efficient because they are commercially efficient.

If these channels were found not to be spectrum efficient because spectrum use rather than 'ownership' was measured then - as both Cave and the 2003 Communications Act require - Ofcom would need to withdraw their licenses and offer the spectrum to services that offered larger audiences or technically more efficient use.

Devolution and subsidiarity

Local, regional and, more recently, the devolved governments have started to consider how spectrum might be used for local services tailored to the economic needs and cultural aspirations of those in their administrative areas. This consideration involves exploring legislation and regulation to first imagine and then consolidate local access, to tackle economic, democratic and cultural inequalities that have become reinforced by commercial services being introduced under state patronage.

For the Scottish parliamentary elections of 3 May 2007, the electorate voted in favour of providing for local and community media and/or broadcasting devolution from the digital dividend. Viewer studies conducted or commissioned by the regulator and others since the 1950s have shown strong demand for localised public service television as a 'third tier' of broadcasting (Holden, Pearmain and ORC International, 2006). The public's objective remains for local TV be seen on TV, at least until broadband capacity and use is equally available for all (MORI, 2005:36) by when local TV should serve all communities (Sancho, 2002:30).

Lord Sandy Bruce-Lockhart, Chairman of the Local Government Association wrote (12 June 2007) to Lord Currie, Chairman of Ofcom:

> Television is still the greatest source of information flow. I believe that it is essential for television to have a stronger element of regional and particularly local news and programmes. Local means areas of governance such as cities and shires. … The changes in Government policy and in the Local Government Bill are very much about emphasising the importance of 'place', the fostering of a sense of local identity and belonging. But they are also about, needing to hold local decision makers to account locally, through local Select Committees, local council leaders, and those that head up the NHS, Police and other local public institutions. Again this requires public awareness to create interest. Each of these challenges would be greatly advanced by local television (Williams, 2007).

[4] Broadcaster's Audience Research Board Ltd, http://www.barb.co.uk/

On 19th September 2006 Alex Neil MSP, Chair of the Culture and Enterprise Committee of the Scottish Parliament, also wrote to Lord Currie, Chair of Ofcom:

> I am writing to you to request that no decisions are made on the use of broadcast spectrum that exclude the introduction of Local TV channels with DTT roll out to reach all households in Scotland. Furthermore, spectrum should not be allocated or regulated so as to restrict or inhibit the introduction in future of new independent public channels from and for Scotland.

On 2nd April 2008 Alex Salmond, First Minister of Scotland, addressed by letter the 3rd Scottish Local TV Forum meeting in Aberdeen:

> We need to ensure that broadcasting in Scotland reflects the richness of our communities … Local television can have a part to play in expanding the cultural content broadcasting in Scotland has to offer. It also has the potential to be a great mechanism for enhancing civic engagement and strengthening the communities it serves. Already I have requested that Ofcom ensure that spectrum is available for local television, to allow for its development in light of Minister's decisions after considering the report of the Scottish Broadcasting Commission.

III CONCLUSION: Devolution and Subsidiarity

Based on the principles of devolution and subsidiarity (or double devolution) each tier of Government should retain responsibility for communications that achieve public goals at their tier of administration enabling a more equitable commercial and public communications that is democratically accountable across state, nation and local area.

FIGURE ONE: Indicative distribution of regulatory functions

UK services	***Nation services (Scotland)***	***Local services***
Wireless		
PSB broadcasting	Nation PSB broadcasting	Local PSB broadcasting
BBC, ITV, C4 & 5	BBC Scotland (?) Gaelic	Local public service TV
BBC radio	BBC Radio Scotland	Small-scale local radio
UK commercial radio radio	Large-scale commercial radio	Community radio
Wired		
	Cable	Cable (local must carry channels)
	Telephony & Broadband networks	
	Nation services	Local services
Joint nations working-group		
Satellite services subject to EU and State requirements.		
Cross border issues to be brokered on a state-nation basis		
State responsibilities would be those clearly identified as state-wide and cross-state or		

services across international borders

Combined nation responsibilities would oversee cross-nation responsibilities – equal representation from each nation regulatory body

Local responsibilities would be service and channel provision issues for local civic scale areas – to ensure spectrum and wired provisions not delivering on a state- or nation-wide service addressed local needs

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