

ACTO5

local public service television directory

**GOD'S OWN SPECTRUM:
LOCAL TV & THE PUBLIC GOOD**

Tuesday 1st November Ofcom's
LOCAL TV DIGITAL FORUM
in Manchester - [book by 21st October](#)

**REGIONAL VARIATIONS IN
PRODUCTION SPEND**

**REGIONAL VARIATIONS IN
PRODUCTION COMPANY LOCATION**

DIARY OF EVENTS

ACTO is an advisory committee of local television organisations working alongside the Institute of Local Television. **ACTO**'s initial objective is to share information supporting the introduction of local digital terrestrial television as an independent form of local public service broadcasting.

ACTO was established in 2003 by local television members of the Community Media Association to focus on the introduction of local digital terrestrial television services - or 'local DTT'.

Through the Institute of Local Television **ACTO** is represented on **Open Channels for Europe!** the organisation representing European local and open channels in exchanging information on European practice and in negotiation with the European parliament on small-scale TV provision.

Personal and institutional affiliation to **ACTO** is by a small annual subscription (see page 12) entitling subscribers to copies of Institute of Local Television research and reports as well as to **ACTO**'s research. Subscribers receive early announcement of local TV conferences, forums, workshops and are offered networking and support with submissions to regulators and government and encouragement with local-tv related activities.

ACTO - local public service television directory - summarises recent activity, encourages local lines of research and introduces publications which promote a wide engagement with small-scale local TV.

This is the fourth issue of the directory providing a rolling electronic publication - accumulating information by adding articles, research activities and lists in the form of an expanding updated pdf file. If you have information, research or events - please forward to **ACTO**.

WEBSITES

For information:

on local and community TV in Europe: www.obs.int/db/persky/eu.html

on community TV channels worldwide: www.openchannel.se/

UK's Community Media Association: www.commedia.org.uk/

UK examples of local and community TV programmes:

www.showcase.commedia.org.uk/

.....The Broadcasting Trust's extensive archive of local TV programmes can be viewed on this website - type 'broadcasting trust' into its browser

Ofcom - UK's independent regulator and competition authority includes sections on codes and guidelines, consultations: www.ofcom.org.uk/

..... provides an extensive catalogue of consultations and reports - for background to local TV look out the public service broadcasting consultations - 1-3 and join the Ofcom emailing list for updates on future consultations and publications

Institute of Local Television www.localtvonline.com/ shared with The Broadcasting Trust, website lists publications, provides background papers, illustrates local TV DVDs, 2.4 Ghz TV studies **to download back issues of ACTO 1-4**

www.maccess.org.uk/members/ilt.html

A farmer finds a Saxon treasure chest in his field – who does it belong to? The farmer or the Crown: the farmer might benefit but then so might we all. In civil society ownership hinges around location moderated in favour of any greater public good. But here's a more difficult one, Who owns electromagnetic waveswho owns Red?

ACTO has raised some of the key issues surrounding the introduction of Local digital TV. Here we ask perhaps the biggest question of all – how should we understand radio spectrum and how might digital spectrum best be managed? And then ... whose version of 'best' should spectrum be managed for? Does digital spectrum alter dramatically opportunities for rights of access - requiring greater clarity in how and for whom those rights are being established?

GOD'S OWN SPECTRUM: Local TV and the Public Good

“A public good, in economic terms, is something that is best provisioned for everyone (an economic characteristic called non-excludability) and which anyone can use without depleting the resource (a characteristic called non-rival use — individual users aren't rivals for the resource.)” Clay Shirky, 'The Possibility of Spectrum as a Public Good' in *Economics & Culture, Media & Community, Open Source*, 2004

Frequency and power are real attributes of the waves that make up spectrum.

*“The questions revolving around regulation of that spectrum, though, aren't about those characteristics. Instead, they are about the engineering of systems that make use of the characteristics of frequency and power”.*¹

The broadcasting regulators make two assumptions about such systems which are rooted in analogue radio engineering dating back a century.

The first assumption is that frequency can be defined as a physical path or line. The transmitter emits a frequency which travels to the receiver which in turn is tuned to select the frequency. In analogue transmission the information carried by the waves does not remain precisely confined to their frequency path and behaves much like a drunk man wobbling along a path to his home.

Analogue transmission and reception has been built on the idea that particular frequencies should be allocated to suppliers, knowledge of the frequencies made available to relevant receiver manufacturers and to potential listeners and viewers as well. With a single frequency the amount of data that can be transmitted is limited. Because of the compromise between signal reach and data quantity the most useful frequencies are in the Kilo-hertz (Khz) to Gigahertz (Ghz) range. These frequencies are 'low' enough to travel through most walls while 'high' enough to carry carry sound and video.

“The old mindset, supported by over a century of technological experience and 70 years of regulatory habit, views spectrum—the range of frequencies, or wavelengths, at which electromagnetic waves vibrate—as a scarce resource that must be allocated by governments or bought and sold like property. The new school, pointing to cutting-edge technologies, says that spectrum is by nature abundant and that allocating, buying or selling parts of it will one day seem as illogical as, say, apportioning or selling sound waves to people who would like to have a conversation.” *Spectrum Policy: On the Same Wavelength, The Economist, San Francisco, 12 August 2004.*

As well as frequency, the broadcaster requires sufficient transmitter power. For terres-

trial broadcasting the variations in terrain inhibit and shape each signal's reception pattern. Transmitters are located on hilltops requiring smaller relays or repeaters to be employed to retransmit an off-air signal to fill in any gaps in reception.

The broadcast signal will travel well beyond the point at which it offers a receivable signal. In general terms this signal is still able to cause interference to a receiver tuned to the same signal (and to signals on adjacent frequencies). This interference is not between the signals themselves but with the receiver's capability to distinguish one signal from others.

To avoid these problems large swathes of frequency are left 'empty' as buffers – against which (if you like, and I'm stuck with it now) the drunk man of the signal can safely stumble – and safe distances are required after the last house receives a watchable signal before the same frequency can be reused somewhere else.

In the transition from analogue to digital television virtually all of the old analogue transmitter and relay infrastructure will be reused – far more than if analogue had been scrapped and an entirely new digital service launched some while later. The managed transition from analogue to digital will build in inefficiencies which are not of digital's making.

The decision to use all the present sites is in part attributed to running analogue and digital side-by-side while ensuring the public service reach for digital stays at close to 100% of the UK population. The solution avoids forcing too many of the less enthusiastic viewers to install a new aerial pointed away from their current analogue transmitter site.

But while an objective is to secure universal access for public service television use of so many transmitters is not efficient and their location is not configured to deliver national services. The television network is composed of regional, local and neighbourhood transmitters and relays. There are no national transmitters and no national frequencies that reach every home in a single stride.

When television (and radio) launched only a few areas of the country could receive a service – with radio a 'local BBC service'; with commercial television a 'regional TV' service: a service mostly from a single 'local' main transmitter. For a decade or more with television – and until 625 line UHF replaced 405 line VHF – cable relay companies made a precarious living running TV into those areas where the signal was too weak. The idea of filling in the regional transmitter map with relays also blurred the regional boundaries – the objective then (for viewer and broadcaster alike) was to have 'better' programming which regional TV had not been able to sustain. (Notwithstanding that, the IBA research from the 1950s onwards suggests that viewers wanted local rather than regional TV – finding regional too remote from the outset!)

Spectrum as Property

The problems of signal interference have been circumvented by a form of regulation which views frequencies as 'property'.

“With the old model of transmitters locked on one frequency and receivers unable to do anything but listen, this was the right answer. Accordingly, almost all the usable spectrum was licensed to a small number of parties, especially the Government and broadcasters. These organisations in turn use only a tiny fraction of this spectrum, treating the rest of it as “white space”, a buffer zone against competition from other signals. (This imbalance between used and unused sig-

nal is actually getting more extreme as broadcasters transition to digital signal, which requires an even narrower slice of frequency than analogue signals do.)”

The ‘property’ model of frequency has a number of flaws – because they can be remedied several of these flaws become more obvious with the transition from analogue to digital broadcasting. This transition also serves to highlight the scale at which ownership and ownership rights for terrestrial transmission are being favoured.

In the ideal scenario when a national channel is to be transmitted for reception to all households is to use a solitary large transmitter tower from which a single frequency could reach most or all receivers – a national audience would then receive the same signal transmitted using just one frequency. A huge tower - or a satellite - offers the most efficient way of delivering national television channels to almost every home - where no regional or local variation is required.

The UK’s network of large transmitters and numerous relays uses umpteen frequencies to avoid interference: it is massively inefficient - with today’s technology it’s an extremely clumsy and wasteful solution especially when this spectrum is all deployed delivering almost entirely national channels. Looked at afresh – the very limitations of geography and location are better able to offer a good – though not ideal – network for Regional and Local TV services. It has been conceded that Regional TV is too big which leaves Local TV as the more efficient use of the existing television network and spectrum than national TV.

But the Government and Ofcom view spectrum as property and they prefer to regard this property as national rather than local asset. The national scale of ‘ownership’ follows the seventy year ago annexation of ‘local’ frequencies to form a national network - first with radio then TV. The steadfastness of this slight-of-hand as we move from the analogue into the digital era serves to obscure the purpose of acquiring and coordinating use of this spectrum under a national umbrella: that was to organise and assemble local frequencies to provide *national public services*.

The recent change of emphasis towards a market in broadcast digital spectrum arises at a point when the *national public service* objectives have been satisfied (over satisfied in the abundance of national channels). Is creating a market in spectrum a regulatory step too far ? As more spectrum becomes available for use in digital form, as scarcity and the protectionist approach becomes less convincing – should a national regulatory view prevail at all - or shouldn’t local regulation of spectrum reclaim local access and outline local spectrum use?

The economic and legal reality is that the television transmitter network involves over a thousand specific, focused and entirely ‘regional/local uses’ of frequency all within local authority, regional and UK nation areas. In other ‘property’ scenarios the ownership issue and use-value of these assets would be subjected to local planning considerations by elected administrations who might provide for commercial benefit as well as community gain.

The rightful-guardianship issues for spectrum seem to have gone unnoticed by the solicitors in the nations or by the legal departments of local authorities. Terrestrial television spectrum configured on the transmitter network use a ‘local asset’ – an asset that can only be used where transmitted. So why has this been largely overlooked?

The national approach to regulation still draws on the original objective to create and sustain for the common good a *national public broadcasting service*. In the

changed circumstances - with that task complete and surplus spectrum available and with fewer problems of interference to be resolved - it would seem appropriate to consider local accountability and spectrum sovereignty.

"Spectrum is purely descriptive — a frequency is just a particular number of waves a second — so no one can own a particular frequency of spectrum in the same way no one can own a particular colour of light.

Instead, when an organisation 'owns' spectrum, what they really have is a contract guaranteeing ... prosecution if someone else broadcasts on their frequency in *their area*. The regulatory costs of forcing spectrum to emulate property are enormous, but worthwhile so long as it leads to better use of spectrum than other methods can. That used to be true. No longer." (my italics)

The inefficiencies and distortions arising from treating broadcast spectrum as a form of subdividable national property serves only to hide some of its more efficient and flexible economic and social uses.

Change is afoot

The drive for a change in both the conception and administration of spectrum comes from several quarters and is largely a result of greater flexibility from digital spectrum beyond traditional broadcasting transmission and reception technologies.

Smart transmitters and receivers coordinate the transmitter power required in different situations – power can be moderated to suit prevailing spectrum activity.

Another innovation is the introduction of spread-spectrum radio in which the signal is encoded in several frequencies simultaneously. This serves to separate the link between the frequency of a signal and the amount of information or data it carries. Because both receiver and transmitter are 'hunting' they can agree on the optimum way of sending and receiving a signal at any given moment, thus avoiding the traditional form of interference.

Using the 2.4Ghz frequency WiFi is an internationally licence exempt band which has been the spur to the introduction of many new digital services unimpeded by prior licensing consents. Local TV has also benefited from using 2.4Ghz in its FM form for the e-tv channel in Aberfeldy while Channel 9 in Derry uses 2.4 for its OB links.

By uncoupling this 2.4 band from regulation there have been massive gains and innovations in use value – social, economic, business, educational and community - many innovations would not have been contemplated at all had a licence been required. The limitations of 2.4Ghz are its range and its poor signal penetration.

"WiFi networks ... are capitalized by the users, one hotspot or PC card at a time. This model has provided an enormous amount of flexibility in business models, from the Wireless ISP model being pursued by T-Mobile and Starbucks; to the civic infrastructure model, as with Emenity unwiring parks and other public spots; to the office LAN model, where a business treats Wifi access as part of the cost of doing business. And then, of course, there's the home user model, where the user sets up an access point in their house and uses it themselves, as they would a toaster or a TV, without needing to offer access to anyone else, or to come up with a business model to cover the small one-time charge.

There are two ways to build \$10 billion in network infrastructure. The first is to get ten large firms to pony up a billion, and the second is to get 10 million users to

spend a hundred dollars each. WiFi fits that second model, and has created an explosion of interest and experimentation that would be impossible to create in a world where the 2.4Ghz band was treated as property.”

The 2.4Ghz spectrum is not treated as property but as a common or public good.

“The right to broadcast on the 2.4G spectrum is almost worthless, since everyone has that right in an unlicensed regime. But the economic value created by uses of 2.4G are almost certainly higher than for any other section of spectrum, and is still growing rapidly.”

But moving the common property adopted for WiFi to other spectrum will be problematic.

“The broadcasters have a legitimate concern about old-style interference, of course. After 70 years of hearing that anyone else broadcasting in their spectrum would be catastrophic, they are understandably leery of models that adopt alternate models of interference, even models that only operate in their unused ‘white space.’ ”

There are a couple of contemporary European examples where national broadcasting regulation has been abandoned leading to dramatic positive transformations of their respective broadcast television landscapes.

In Croatia, in the years of recovery after the war, instead of returning to large national channels television journalists and broadcasters started Local TV– several hundred channels across the country and fourteen in Nis alone. In Spain over the last decade a confused handover of broadcasting responsibility from central to regional government has led to many years without regional regulation or coordination – initiating a thousand local, community and municipal TV stations operating on an a-legal basis.

The introduction of these Local TV services in Croatia and Spain – running on analogue channels – has taken place without any public distress. How the national broadcasters felt about it is another matter.

These two examples – as well as the manifestly very different broadcasting regimes that are possible with digital – suggests that the regulation of broadcast spectrum serves rather more to protect the incumbent broadcasters in the UK than to engage the public and commercial sector with new and innovative services.

Moot though this point might be – the lifting of scarcity as analogue becomes replaced by digital has seemed to suggest to Government and Ofcom that another central mechanism is required – possibly equally draconian and exclusive: that is to establish a market which can trade spectrum which will leave the existing broadcasters largely untouched and even encourage them to expand their near national monopolies over spectrum use. Only this time around scarcity cannot be justified as spectrum inefficiency so much as a purpose of regulation.

“Spectrum is currently valuable because it is scarce, and it is scarce because it is treated like property. Even if novel uses of spectrum can be shown not to interfere with the current broadcast model, evidence that spectrum can be transmuted from a property-rights model to being treated as a public good might not be welcome, in part because it could call into question the hold the broadcasters have on spectrum.

The potential threat to spectrum holders is clear. We have a set of arguments

for creating and enforcing property rights for things that aren't actually property. We usually apply this artificial scarcity to intellectual property — patents, trademarks, copyright — and grant these rights to protect certain forms of abstract work or communications.

The rationale for all these rights, however, is to reward their creators for novel intellectual work. This does not offer much relief to spectrum holders seeking a justification for continued Government enforcement of scarcity. None of the current holders of spectrum have created any of it — a wavelength is a physical property that cannot be created or destroyed. If spectrum can be regulated without the traditional licensing regime, it's hard to argue that the Government has a compelling interest in creating and enforcing scarcity.”

The sophisticated technologies that allow spectrum efficiencies to be made where frequencies can be switched and power reduced are not being put in place for digital terrestrial broadcasting in the UK. The desire to switch rapidly from analogue to digital to free up analogue spectrum invites minimal disruption for domestic reception in the switchover period to minimise new technology investment by the remaining reluctant analogue householders.

However, the delivery of digital channels in a multiplex (mux) allows for much greater flexibility in how we think of channels. A muxed channel is more fluid and quite different from a channel on a discrete analogue TV frequency.

The use of 'add/drop' technology can replace national channel(s) from the mux as they arrive at each of the 81 main digital transmitter sites, replacing the 'national' channels with 'local' channels: the variable capacity in a mux carries content. The dynamic character of a channel raises questions about whether a channel should be licensed to travel from the source via all transmitters and relays to all homes; add/drop lets you turn off the highway.

For example, if a local regulatory interests were to assert themselves, each digital transmitter would represent a trading customs post. Access by national channels to homes from each transmitter using the 'local' frequencies could be made subject to an exchange: so many 'national' channels granted access in exchange for so many Local TV channels. Odd though this might seem, it's the regulatory model applied to cable to ensure local and community channels are available in the US and Northern Europe. Alternatively all local areas could agree to grant national passage in exchange for local network capacity on the national muxes which could be converted to Local TV using add/drop.

Between themselves the television broadcasters already localise their commercials to suit their perception of the differences in each local market. Add/drop – in principle – allows a local audience to decide amongst itself which channels it wants to have transmitted from the local main transmitter site or even from the local relay.

This discussion hinges on who 'owns' spectrum or rather whose rights should best be reflected in its digital use – if spectrum is to become an economic/market good instead of a common good - then whose market should it be? Should the nations and regional authorities have a say on just how their *local* terrestrial spectrum will be used - particularly where this spectrum is demonstrably no longer required for national public service broadcasting?

There is perhaps a false presumption that having been loaned this local spectrum has somehow become 'owned' nationally: that presumption is entirely wrong. A more appropriate understanding is that local use has been foregone *only* in favour of an

equitable better national use - public service broadcasting: to be returned when not required for that common purpose.

When spectrum is perceived as an economic property and not as a public good the case has to be made - who actually owns it? That is clearly not the same as asking who is currently better placed to ensure its continued use .

Of course ... it is the complete absence of a distinctive local regulatory consciousness towards broadcasting which is the problem here – but which (very ironically) Section 11 of the 2003 Communications Act suggests Ofcom put in place!

Broadcasting has both an economic and a social value currently unacknowledged in the retention of broadcasting as a Westminster/Ofcom only responsibility. The development of a local economy based on the use of local spectrum is a vital economic and social opportunity. Unless broadcasting policy is devolved to the regions, nations and local areas - or provision made on their behalf - these authorities will be unable to benefit their populations with use of this local asset. They will remain victim to 30+ digital channels going 'in' and no channels going 'out'. In a social democracy the economic justification for decentralisation is social as well as economic.

The regional economies require local spectrum

Below we look at the regional skewing of TV production income and the location of production companies. The question of who controls digital broadcasting spectrum begs a widespread political discussion and further public debate.

The legal view might be that an historical justification for an exclusively national retention/annexation of spectrum has to be rearticulated in the changed circumstances offered by digital. National regulation should not be presumed in perpetuity especially where an economic rebalancing is long overdue.

National regulation was a mechanism to solve a century old problem that is fast going away; it was certainly not a mechanism to enable the government to reintroduce scarcity by other means solely on behalf of incumbent beneficiaries and to maintain of regulatory power.

It should not have to be the potential local spectrum user who has to argue for access to spectrum for local use. Instead the case should be made by the national user who requires local spectrum to reach local viewers to agree access for their services. Terrestrial spectrum regulation should revert – by subsidiarity - to local use and local determination except where there is a public service channel to be delivered.

In one example of spectrum benefit – would three national DTT channels be a 'better' economic solution than 250 local channels - both using the same amount of public spectrum?

But what layer of Government should decide this?

And how is the local case to be argued when the local democratic representatives have absolutely no broadcasting responsibility – except for Gaelic (in Scotland)?

1 Unless otherwise indicated, all quotations are from 'The Possibility of Spectrum as a Public Good', August 13, 2004 on 'Networks, Economics, and Culture' clay@shirky.com

REGIONAL VARIATIONS IN PRODUCTION SPEND

Distribution of production monies as indicated in the Ofcom/Pact study 2005.

Looking at the figures in this Ofcom Study – there is a great disparity in media spend across the UK. If TV broadcasting were regarded as an ‘industry’ by the regions and nations this disparity would probably be addressed.

Balance of income/spend in the regions and nations relative to London (Figures from the Ofcom /Pact study 2005)

Estimate of production spending in each area:-

SCOTLAND	£138m
LONDON	£1476m
NORTH EAST	£32m
NORTH WEST	£210m
SOUTH WEST	153m
YORKSHIRE	142m
EAST ANGLIA	27m
WALES	£73m
NORTHERN IRELAND	£43m
MIDLANDS	£106m
SOUTH EAST	£98m

A more comprehensive breakdown than I’ve undertaken below would include comparing each of the English regions identified above with the UK as a whole, with London and with the Nations. For brevity a Nations to UK, Nations to London and London to England (excluding London) comparison is made.

	Production spend in area	
NI	£43m	1.75% of UK production spend 2.9% of population, 2% of broadcast journalism courses,
SCOTLAND	£138m	6% of UK production spend 8.5% of population, 5% of broadcast journalism courses,
WALES	£73m	3% of UK production spend 4.9% of population, 10% of broadcast journalism courses,
LONDON	£1476m	60% of UK production spend 12% of population, 22% of broadcast journalism courses,
ENGLAND	£768m	32% of UK production spend 65% of population, 61% of broadcast journalism courses,

REGIONAL VARIATIONS IN PRODUCTION COMPANY LOCATION

Distribution of production companies (based on Kemps online directory).

- Almost half of the UK’s independent television production companies are based in London, an area with roughly a twelfth of the UK population.
- England (excluding London) and two thirds of the UK population has roughly two thirds the number of London’s independent producers .
- Scotland in turn has about a twelfth of the number of production companies to be found in London – while Scotland has a population two thirds that of London.
- Wales has half as many producers as Scotland and Northern Ireland half as

many as Wales.

DIARY OF EVENTS

Tuesday 1st November from 10.30

Local TV Digital Forum

Ofcom seminar on local TV and interactive content

Manchester Town Hall

The event forms part of Ofcom's project examining the future of local video content and interactive services, which itself stemmed from our Review of Public Service Television Broadcasting.

Ofcom plans to issue a report, containing policy options, around the turn of the year. At this event, we want to gather as many facts and opinions from those with an interest in this area as possible. The day will include:

- Keynote address by **James Purnell MP**, Minister for Creative Industries and Tourism
- Brief presentations covering a wide range of approaches to funding, content and delivery of local services
- Sessions on BBC plans and technical issues
- Opportunities for debate, chaired by **Tim Suter**, Ofcom's Partner for Content and Standards.

For an invitation contact caroline.o'dwyer@ofcom.org.uk by Friday 21 October 2005

Invitation to the Berlin European Media Literacy Conference IV

Media and Social Intervention

November 11 - 13

Location: Offener Kanal Berlin, Voltastr. 5, 13355 Berlin

General aim

An increasing number of media initiatives across Europe show a wide range of different content, contexts, audience groups and local media output. This Media Literacy Conference invites people from these initiatives to develop a better expertise in the approach and results of their media work and to deepen democratic and direct media impetus in Europe.

The topic of "**Media and Social Intervention**" focuses on methods and examples which helped people to develop their own critical voice through the use of independent media.

The Media Literacy Conference IV would like to continue the dialogue which was started three years ago. Project presentations, workshops and open discussions will contribute to develop our coalition of European partners supporting media literacy within the wider framework of the new organisation "Open Channels for Europe!".

BOOKS, REPORTS & PUBLICATIONS

LOCAL TELEVISION RENEWED: essays on local television 1994-2005 published by School Press for the Institute of Local Television, August 2005. 112 pages, available in pdf

format at £7.00 from 5th August or as a softback book at £13.50 inc p&p from 30th August 2005.

LOCAL TELEVISION RENEWED provides a vigorous critique of the political impact of public service broadcasting since 1990 and argues for two hundred plus independent local, community and municipal television channels in line with developments under way across Europe. **LOCAL TELEVISION RENEWED** outlines how these proposals for local TV channels can be introduced as part of digital switchover from 2008 and expanded via broadband.

LOCAL TELEVISION RENEWED: essays on local television 1994-2005, ISBN:1 899405 03 8

Dave Rushton, published by School Press (2005) £13.50 inc p&p 112 pgs Softback (or £7.00 for single copies in pdf format downloaded to your email address.) Preamble; Introduction; Technical Background; Virtual Reality; Vicarious and Experiential TV News; A General Theory of Spectrum; Defining the Social Geography of Local News Identity; Assessing opportunities for local digital TV across Europe; Add/Drop and the Local Network Channel. APPENDICES: A Local Television Reader; Scottish Local TV Forum Report; Some pointers for filming local TV news and short documentaries

Personal cheques for books and/or the pdf version of Local Television Renewed should be made payable to 'Institute of Local Television' and sent to

Institute of Local Television 13 Bellevue Place Edinburgh EH7 4BS Official orders and further enquiries can be sent to the address above or to local.tv@virgin.net.

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AND FINALLY

request a copy of the local TV logo - will be sent to you as a small jpg file and pdf file to cut and paste into newsletters, letters, emails and publicity



To add to this directory - offering further reasons for local TV in your area, examples of local TV activity, expressions of interest in local TV, forums, events etc - email to local.tv@virgin.net

To be removed from the **ACTO** electronic mailing list please advise local.tv@virgin.net