

Sussex Surrey Radio Group

Dear Soo

On behalf of the Sussex Surrey Radio Group which has been operating RSL's regularly over the last 10 years under the name of SUSY Radio, please find attached our group's response to the consultation document "Licensing Community Radio" for your consideration.

In addition, our senior engineer and licence holder, Colin Pearse, would also like to take the opportunity of submitting a discussion document ""Frequency Planning For Community Radio", and this is enclosed as an attachment.

With thanks and regards

Ian Rennison

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**Question 1:**

**What role should Ofcom have in respect of community radio, beyond the licensing of new services?**

The regulator should provide a reference point with regards to the promise of performance details as supplied by the licensees' original application and the maintenance of technical standards. The regulator should be flexible and open-minded when asked to vary promise of performance criteria and/or technical parameters in order to promote the viability of small-scale licences on an on-going basis.

Ofcom should be careful not to over-regulate the new system - it should aim to WORK to make the licence available as simply and easily as possible. The regulator should have a speedy complaints and adjudication procedure.

**Question 2:**

**Do you agree with our proposed policy for the allocation of spectrum and the size of coverage areas for community radio services?**

We do not agree with the technical proposals for spectrum allocation and coverage size. FM allocations should be dealt with on an entirely new basis, which will allow far more efficient use of frequencies and hence the licensing of far more stations. The size of 5km radius is in most cases far too small. The catchment areas need to be large enough to ensure financial viability and the possibility of a worthwhile audience size. We consider that a radius of 10km should be more akin to the norm where the exceptions may be either (1)

Small integrated villages, miles from anywhere where 5km radius would easily cover the area or (2) in inner cities where frequencies may be scarcer. A detailed technical submission is attached.

**Question 3:**

**Do you agree that community radio should be an applicant led process with an annual 12-week period when applications can be submitted for any neighbourhood or community in the UK?**

The applicant should be "king". The regulators attitude should be - you proposed this - well how can we help you, and how can we help your group realise its aspirations within a lightly regulated framework. It should be as inclusive as possible. This sort of culture is not often seen in the UK but is not uncommon in other countries i.e. the US. Many of these other countries have had community radio for some years.

**Question 4:**

**Do you agree with Ofcom's proposal to invite submissions from commercial radio operators if they consider that their economic viability might be affected by the provision of a community radio service, based on the application proposals?**

Ofcom should consult with commercial operators and invite comment in all cases where economic viability might be affected. This will particularly concern the smaller privately owned stations and small groups, however not the larger chains. Local traders or sponsors who may be attracted to support community stations may not be able to afford the rates demanded by the larger commercial operations owned by media companies, and therefore the effect of a small volunteer-led community service would be minimal. The regulator should be careful to limit licences that could be deemed as unfair competition to smaller ILR operators.

**Question 5:**

**Should there be a general limit of 50% of annual income that community radio stations are permitted to obtain from the sale of advertising and sponsorship, or should this be decided on a case by case basis?**

Financially each licence is different and should be considered on a case-by-case basis (question 4 refers). A flexible approach will ensure the best chance of success for each new operator. In an area where there is either no other commercial service, or the local ILR(s) is owned and operated by a large media company, the financial impact of a small volunteer led neighbourhood service is going to be minimal, and to restrict it could be considered unnecessarily harsh. Consideration should therefore be given on an individual basis and if it is felt that a higher percentage could be allowed given the foregoing, the regulator should be permitted to allow that.

**Question 6:**

**Are you content with Ofcom's proposals for the submission of applications?**

"Keep it simple" is a very good parameter in respect of submissions. Further good rules would be to keep it practical, affordable and open to as many people as possible.

**Question 7:**

**Are you content with Ofcom's proposals for the order in which it will consider applications in the first year?**

The proposals are good for the introduction of the new services. There is an opportunity for Ofcom to introduce a new innovative approach to the way that the regulator deals with the many differing issues of new licences.

**Question 8:**

**Aside from the Government's selection criteria, what other criteria should Ofcom use when deciding between applications?**

Consideration should be given to any demonstrated ability to sustain such a service, a history of successful RSL projects, local community activity during such RSL's etc. In this document Ofcom have already acknowledged the value RSL's can play in providing the groundwork in setting up a community service. Decisions between applicants should not solely depend on what might seem to the regulator as "the best business plan". These plans often can fail. Conversely, Ofcom should not be afraid of licensing "a failure". Adventurous and innovative ideas must be encouraged for the new system to flourish during the coming years.

**Question 9:**

**Are you content with the proposal for listing a station's key commitments in its licence?**

Your performance commitment is key to your application. Variations should be made flexibly by Ofcom to fine-tune the way a licence can be operated successfully as it is developed with experience gained through the practicalities of being "on air". It is not always easy to anticipate everything, and there should be allowances for "fine tuning", particularly during the first months of broadcast. This should not detract from the original stated purpose of the station.

**Question 10:**

**Are you content with Ofcom's proposal that each station should produce an annual report?**

It is important to the system that the regulator gets regular feedback from its licence holders concerning their activities and progress, together with any concerns or problems they might have. A concise uncomplicated reporting system is thought to be essential in developing the medium perhaps on an annual basis.

**Question 11:**

**Do you have suggestions on how we might research the impact of community radio services on target communities or on other methods of seeking feedback from communities?**

The regulator might research the impact of particular licences by contact with local institutions and organisations such as councils, community organisations, cultural centres,



## **FREQUENCY PLANNING FOR COMMUNITY RADIO** **LOW POWER ALLOCATIONS**

### **FORWARD**

It is a fact that since pressure for commercial radio in the sixties and its eventual introduction in the seventies, the argument of the non or limited availability of frequencies has continuously been used by the regulatory bodies. This has effectively retarded the growth of the medium both in purely commercial radio and sound broadcasting in general. With the establishment of a single regulator, one might hope that a more innovative approach to spectrum allocation will result.

The introduction of large numbers of ILR's over recent years might lead people to believe that the laws of physics have changed. This is, of course, not the case as it has been shown with the removal of service duplication, judicious frequency clearance and a more flexible use of what was available has comfortably coped with the growth. The question is often posed "How many stations might be accommodated?" The London area is frequently quoted as having virtually no spare capacity with little chance of any availability for channels on FM.

It is a fact, however, that in London and several other major cities at any one time there are more unlicensed stations broadcasting than legitimate ones. Many of these use high power, typically 200 to 500 watts from good sites. With this in mind, you might conclude that the system is in a virtual state of collapse. However, although interference cases are not uncommon, they are not as rife as you might at first think. I use the illustration merely to suggest that there might be far more available channels than we have so far been led to believe.

Three questions arise from this. Firstly how do you discourage illegal stations from jamming the many new proposed services? Secondly, can anything be done that might encourage illegal operators to legitimise themselves? Whilst there will always be those who operate outside the law, how much creative thinking has to be introduced to impact significantly on this problem. Thirdly, given the authority's inability thus far to curtail the growth in "pirate" operators, can anything radical be done to achieve more vigorous enforcement.

### **CHOOSING F.M.**

F.M. will be the platform of choice for most would be low power community broadcasters. Its low cost, high quality and ease of installation are the obvious attractions. I strongly argue that a radical solution in the use of what is

available is the answer. There is a need to deal with these new low power licences as a “single issue” on a single band of frequencies with a new set of parameters for that band only. The licenced transmissions would be standard F.M. broadcast signals. The only space available for this without major disruption is the 87MHz sub band being 87.5MHz to 88MHz. Mention of RSL use is made in Ofcom’s original documentation. However, my past experience of participating in many RSL’s over the past 10 years is that widespread introduction of community licences will dramatically reduce the demand for RSL’s. Whether an RSL is a “trial” or “special event” project, a commonality exists between them is that many of the participants were driven by a passion for the medium of radio. I will use the analogy that if you give away sweets, the sale of candy bars will surely plummet. Whilst there will still be some demand for RSL’s, this will surely be greatly reduced. It would then seem sensible at the outset to give the 87MHz sub band over to the new services, and in the main, try to accommodate RSL’s elsewhere. As a matter of policy, filling up the sub band with low powered stations gives notice that high powered illegal operators would not be tolerated in this part of the spectrum.

At one time, it was common that the Radio Authority would only issue 87.7MHz for RSL’s. Several years ago, I made a technical representation to the authority pointing out that 87.9MHz could be issued to us as there was sufficient isolation between us at Reigate and the closest BBC channel used on 88.1MHz at Guildford. We were not the first RSL to use the channel, but we were granted a licence upon that request. I reached the conclusion at the time that the RA were just trying to be too careful in not having previously offered it. The chance of low power allocations causing problems in the coverage areas of high power BBC repeaters is probably very small.

Another channel exists which is the band edge i.e. 87.5MHz. This has already been used by pirates, but effectively puts half your signal out of band two. Much of the UK has no allocation in that part of the spectrum so theoretically, it could be used. The argument could be made that such use would have to be cleared internationally. This is not the case because we are only talking about low power allocations. The use of 87.5MHz would also allow the use of 87.6MHz as an offset. I note that Ofcom has recently obtained international clearance for a 4kw maximum allocation on 87.6MHz. In practice, space below the band edge has been fairly free of PMR because of the interference they might cause to broadcast signals just inside Band two. These are far more prone to this than vice versa because of the AFC and capture effect in domestic radios. The relatively narrow bandwidth of PMR signals is much more immune to such problems in this case. Likewise, the top band edge 108.0MHz could also be used for low power licences in areas where aeronautical users are not too close to the band edge. In practice, NATS use the first channel for test purposes only, on a national basis.

### **CAPTURE EFFECT**

The “capture effect” is well known to radio engineers as a feature of the F.M. system. Simply demonstrated, it means that two signals on the same frequency having similar strengths will “chop” between one another in an F.M.

receiver whichever one becomes slightly the stronger. In practice, this means orientating your aerial might result in the reception of either service. With typical low power allocations on the same channel is unlikely that primary service boundaries will cross. To use a very simplified example, two stations at 30km distance. Given reasonable power might have solid coverage out to, say 10km and then beyond that in "no man's land", either signal may be receivable.

## **EFFICIENT REUSE OF CHANNELS**

As previously discussed, three spot frequencies are available being 87.5MHz, 87.7MHz and 87.9MHz. A further two offsets may be used to give some immunity, these being 87.6MHz and 87.8MHz. I will also suggest that in view of the low power involved, 88.0MHz would be available in some areas in consultation with the BBC. They, of course, do not want to give up channels. However, I am sure that my proposal would not be a major issue to them.

Given that a standard broadcast signal extends far beyond the nominal 75KHz deviation (see appendix) the energy outside the nominal channel is quite small. High immunity figures for signals on the same or close channels are simply not required with these types of low power applications. With well limited signals, reliance principally upon the capture effect should prove satisfactory.

## **A NEW SYSTEM**

With three available channels and two, perhaps three offsets, a practical engineering solution may be formulated by drawing a new set of rules. These will vary slightly with population density, power allocations and geography. Extensive sole use of the 87MHz sub band would allow interference caused by illegal operators there to be treated as a single separate issue and may, I suggest, be more easily enforced if the will exists to do so.

Very simplistically, the new system would operate like a cell phone box grid. The cells would not always be square, and would be large in urban and rural areas, smaller in cities. A typical scenario would be reuse of the same channel every 30km for example, at points where the box grid is biggest. Each primary frequency might have its own grid with two or three more grids for the offsets. In the "no man's land" part of the scheme, the mutual interference might mean that you might commonly be able to receive several signals on the same channel depending on how you position your aerial. It is important at the outset that any new licensee should be clear about the coverage they were entitled to. As the cells fill up, coverage areas will shrink. It is important in such a system that the primary service boundary is defined so there can be no arguments later.

## **LICENSING REPEATERS**

There will be a requirement in a large number of cases where community stations will need to service small pockets of population within their catchment

area. With “on channel” repeaters, these would be both expensive and difficult to provide. A straightforward cheap solution would be to utilise the already mentioned band edge channel 108.0MHz. This is ideal for the purpose in situations where only a few watts are required with perhaps directional transmitting aerials. With high isolation from the main transmitted signals in the lower sub band, direct conversion transponders or repeaters that take the signal to base band and re-transmit it would be cheap, high quality and easy to engineer. Electronic locks to protect signal inputs could be also cheaply provided within the hardware. This system gives direct, off-air rebroadcast rather than a messy, fragmented arrangement using landlines and radio links. The one channel only could be reused hundreds of times over. Aeronautical clearance for low power allocations would be a consideration and subject to clearance. Type approved package transponder and repeater “bugs” may be made available quite cheaply. Modern synthesised transmitters used on 108MHz pose no more of a problem for close users out of band than, say, signals radiated in the middle of band two, especially in view of the low power aspect. Reuse of the channel by one broadcaster should not be an issue.

## **SUMMARY**

The advantages of adopting such a system are many and will allow the licensing of hundreds of small stations quickly and simply. Frequency planning will become much easier. It is possible that some RSL’s might use some of the channels whilst the system is still fairly empty. It may be prudent to move these elsewhere later so that they are dealt with as entirely separate issues.

## **FOOTNOTE**

The views expressed draw on my experience of having engineered more than sixteen RSL’s (both A.M. and F.M.) over the past 10 years, and our group’s involvement in at least a further dozen. I am an engineer, but do not work in the broadcast field. Colleagues who work within the industry are of a view that the suggestions made form the basis for a practical solution.

I would like to thank members of Ofcom for taking note of the attachment to question two. I have, on purpose, kept the technical detail to a minimum in order that it is relevant to semi technical staff as well as the engineering group.

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Operating as SUSY Radio)