Annex B: Summary of Responses to the BCAP Consultation on Sound Levels of Television Advertisements and BCAP's Consideration of those

SIGNIFICANT RESPONSES		EVALUATION	
Respondent(s)	**Key Points**	**BCAP Comments**	**Drafting Change**
Q1. Do you agree that the <u>note</u> to the rule does not provide adequate technical guidance for broadcasters to ensure compliance with the present rule? Do you agree, because of that, the <u>rule</u> relies too heavily on the audience's perception of loudness?			
Broadcast Project Research; Confidential respondee; Dolby Laboratories, Inc; Individual (Mr G.); Grand Central Sound Studios, 750mph and the Jungle Group (comprising Jungle, Zoo and Marmalade Studios); Individual (Mr H.); Individual (W.H.); Institute of Broadcast Sound; Mere Mortals Post Production; Red Bee Media; S4C; SCI FI Channel Europe LLC; Virgin Media Television and UKTV	1.1 **Yes.** Points raised in support: 1.1.1 In 1994, Girdwood and Emmett showed that among 20 family groups there was no significant perceptual factor in broadcast loudness, and a sensory element was dominant in all cases. That is actually a good thing as it means that a loudness meter could be built. Even if audiences vary in their mental attitude to programme material, they still statistically find the same parts loud. 1.1.2 We feel that the existing Note is unclear and depends on too much subjective judgment from the broadcaster, which creates too much variation for the audience. Commercials are all compressed to some degree, and the crux of the current problem is that since there is no measurement tool currently available to tell the Broadcaster what is	1.1.1 BCAP considers that, because audiences' perceptions of loudness levels can be measured objectively, it is possible to use subjective loudness meters to measure the loudness levels of TV ads. On that basis, the proposed rule suggests that broadcasters could use loudness meters conforming to ITU standards to monitor compliance with the Code; BCAP considers that that provides more technical guidance for broadcasters than the existing rule. 1.1.2 No comment. 1.1.3 Cf. BCAP's comments to 1.1.1. 1.1.4 BCAP agrees that, ideally, broadcasters would not have to adjust the sound levels of any ads they receive for broadcast. In practice, however, broadcasters do occasionally need to adjust ads' sound levels to ensure compliance	None.

	"highly-compressed", the Broadcaster has to decide what they deem "highly compressed" and then how much to reduce possible offenders – both of which are hugely subjective decisions. 1.1.3 The reference to perceived loudness meters is too vague and, if they are to be used, a single agreed standard must be prescribed. Overall the rule and the note are too vague to be of much practical use. Papers presented to the AES support the theory that a meter can be used as audiences found the same parts of material loud regardless of their mental attitude to the material itself. 1.1.4 I agree that the rule does not provide adequate technical guidance for broadcasters to ensure compliance. I do not however feel it should be the broadcaster's responsibility to turn down commercials they perceive to be heavily compressed. It is this practice which is causing the difference between levels within the ad breaks. I believe that a clearer rule to providers of audio content will ensure a constant level amongst the ads. Ads delivered to the broadcaster not meeting these level requirements should fail transmission quality checks.	with the rule – and it is ultimately a broadcaster's responsibility, under the terms of their Ofcom licence, to comply with the Code. If a broadcaster frequently has to adjust the ads they receive for broadcast, BCAP considers that that is a matter for discussion between the broadcaster, advertiser and relevant ad delivery houses; BCAP cannot seek to regulate the working practices and relationships between broadcasters and advertisers.	
Confidential respondee; ISBA; Wave Recording Studios	1.2 **No.** Points raised in support:	1.2.1 BCAP agrees that the desired effect of the existing rule ("a fairly constant average level of sound energy should be maintained in transitions	Advertisements must not be excessively noisy or strident.

	1.2.1 The rule is clear and comprehensible, both in technical specification and in desired effect. However, viewer complaint and anecdotal evidence suggest a disconnect, insofar as the technical rule – or broadcasters' interpretation, implementation or perhaps even compliance – does not always appear to deliver the intended effect to the viewer. 1.2.2 By stating an absolute upper peak and an upper peak for highly compressed advertisements, and by recommending broadcasters use a perceived loudness meter, the existing rule does provide adequate technical guidance. The existing rule allows advertisements that are not compressed, or those that are lightly compressed, to peak up to PPM 6. That allows those advertisements to be broadcast without sounding quieter than surrounding programmes. The rule does not rely too heavily on the audience's perception of loudness: the audience's perception of loudness is crucial. Nevertheless, the proposed rule does not stipulate a maximum subjective loudness level for advertisements. The proposed rule also can not regulate the environments in which members of the audience hear advertisements. Those factors that are outside the broadcaster's control impact on the audience's perceptions	from programmes to advertising breaks and vice versa so that listeners do not need to adjust the volume") is a suitable over-arching principle in a rule that seeks to regulate sound levels in TV ads; that principle was a useful starting point when redrafting the rule. To retain that over-arching principle, BCAP has decided to reintroduce the first sentence of the existing rule to the proposed rule. BCAP is mindful of broadcasters' concerns, however, that the existing rule does not provide adequate *technical* guidance to ensure that that principle is secured. That fact is supported by some broadcasters' uncertainty on how to interpret, implement and comply with the rule. 1.2.2 BCAP decided to revise the rule after broadcasters expressed concerns that it is too vague. BCAP understands that most TV ads either have compression applied to their soundtracks or exhibit a naturally narrow dynamic range as a corollary of their short durations or creative styles; that fact is acknowledged in the response from Grand Central Sound Studios *et al.* (1.1.2). Therefore, ads typically have higher average loudness levels than programme material.	Measurement and balancing of subjective loudness levels should preferably be carried out using a loudness-level meter, ideally conforming to ITU recommendations.

	of the loudness of a TV ad. 1.2.3 Content is now being viewed on mobile phones and computers and so a 4ppm peak will be too quiet for those mediums. Also broadcasters are now beginning to broadcast in 5.1 SURROUND SOUND, which has 6 channels of sound. This cannot be measured on a PPM scale, which only allows for measuring across 2 channels of sound, so how would this be dealt with under the new rule changes? As a sound studio, we can mix all our commercials to 4ppm but because of that limitation, more and more sound will be heavily compressed. That will result in a worsening of the problem as the heavily compressed sound will be perceived to be louder by the viewing audience.	As the consultation document highlights, the note to the existing rule states that "highly compressed commercials should be limited to a Normal Peak of 4" on a PPM but does not define what constitutes "highly compressed". The rule implicitly allows ads that a broadcaster considers are not "highly compressed" to peak to a maximum of PPM 6. In most cases, however, the average sound levels of an ad broadcast at a peak of PPM 6 would likely be significantly higher than the average sound levels of the programme during which it is broadcast: BCAP considers that that would lead to a breach of the spirit of the rule's principle that ads "must not be excessively noisy or strident". On that basis, BCAP considers that the existing rule does not provide broadcasters with adequate technical guidance. BCAP considers that the proposed rule is less ambiguous than the existing rule because it specifies a firm upper limit for all ads. The proposed rule provides broadcasters with two options for monitoring compliance: using subjective loudness meters, preferably those that conform to ITU standards, or using PPMs to ensure that the ads they broadcast peak no higher than 6dB less than the maximum level of programmes. To	

		make it clearer that broadcasters have a choice of monitoring the loudness levels of the ads they broadcast by using a PPM, a subjective loudness meter or a subjective loudness meter conforming to ITU standards, BCAP has made a minor change to the proposed rule. The proposed rule includes a reference to PPMs in recognition of the fact that they have formed part of broadcasters' operational processes for decades: BCAP considers that it would be too soon, given that the ITU recommendations have only recently been standardised, to expect broadcasters to rely entirely on loudness meters to monitor sound levels of the ads they broadcast. The proposed rule does not mandate a maximum level on a subjective loudness meter because BCAP considers that that would be overly prescriptive and would not take account of the varying loudness profiles of different channels. BCAP considers that the role of a rule about the sound levels of TV ads is to provide broadcasters with guidance on how to ensure that the ads they broadcast are neither excessively noisy nor strident; BCAP considers that that role does not encompass providing broadcasters with overly detailed and prescriptive operational procedures.	

			BCAP agrees that an audience's perceptions of loudness can be affected by factors outside broadcasters' control: section 3 of the consultation document recognises that fact. Nevertheless, BCAP considers that subjective loudness meters can provide a partial solution. As has been mentioned by Broadcast Project Research (1.1.1) and the Institute of Broadcast Sound (1.1.3), research has shown that audiences usually find the same material loud, regardless of their attitudes to the material itself; that means it should be possible to manufacture loudness meters that marry the subjective loudness levels of ads with the subjective loudness levels of surrounding programme material.	
		1.2.3	Firstly, the remit of the BCAP TV Advertising Standards Code covers ads broadcast on TV channels licensed by Ofcom. Its remit largely does not extend to content viewed on mobile phones or computers; as such, ads delivered to audiences via those media platforms are not subject to the Code's sound levels rule. BCAP understands that surround sound is used almost exclusively on HDTV channels and that very few ads are made and broadcast with	

			surround sound. BCAP could, however, review the rule in future if loudness meters capable of measuring multi-channel sound were developed. As explained in BCAP's comments to 1.2.2, BCAP considers ads are already typically very compressed or have naturally narrow dynamic ranges. If a compressed ad is broadcast during a programme with a wide dynamic range, and if the ad's peak level is limited to a suitably lower level than the programme, BCAP considers that there would not be a worsening of the problem.	
ITN Ltd	1.3 **The note provides enough information for skilled Sound Operators. For unskilled operators the note does not provide adequate guidance.**	1.3	BCAP considers that, because it expects broadcasters to make subjective judgments about the levels of compression applied to the ads they intend to broadcast, the note to the existing rule does not provide robust technical guidance. BCAP considers the proposed rule is less ambiguous than the existing rule; the proposed rule therefore provides all sound operators, regardless of their levels of skill, with more guidance on maintaining consistent loudness levels between programme material and ad breaks.	None.

Q2. Do you agree that this BCAP consultation is targeted at a case in which regulatory action is needed?			
Broadcast Project Research; Individual (Mr G.); Grand Central Sound Studios, 750mph and the Jungle Group (comprising Jungle, Zoo and Marmalade Studios); Individual (Mr H.); Individual (W. H.); Institute of Broadcast Sound; ITN Ltd; Mere Mortals Post Production; S4C; SCI FI Channel Europe LLC; Virgin Media Television and UKTV	2.1 **Yes.** Points raised in support: 2.1.1 The implication is that these guidelines are not being followed to any great extent. Indeed, all the evidence points to them not being referred to or used for several decades in analogue transmission. For example, in the UK, Pop and Light Music channels appear to peak both music and dialogue to PPM 6 ¼ (M3, Sum signal or mono). In the existing guidelines the subjective identification of "compression" within a programme or commercial remains difficult, and indeed certain well-known Radio "voices" possess a remarkable degree of natural compression without any electronic processing being applied. Summing up any future regulatory guidelines:- 1. In all-digital systems, Loudness guidelines can be reliably based on an objective measurement made with respect to the digital FSD. 2. In practice, Loudness control needs to be linked with the general Quality Control of transmission levels, especially where regulated and unregulated Broadcaster sources and recorded material co-exist in the digital home. 2.1.2 Yes – we believe that regulatory action is needed however considerable further technical research into the use of loudness meters should be completed before a new ruling is issued. The joint	2.1.1 BCAP considers that the existing rule is ambiguous because it implicitly permits broadcasters to air TV ads that they do not deem to be "highly compressed" at a peak of up to PPM 6. That means ads that comply with the letter of the note to the rule still risk breaching the spirit of the rule (ads "must not be excessively noisy or strident"); that is because most TV ads either are compressed or have narrow dynamic ranges: they therefore have higher average loudness levels than surrounding programme material. By providing them with clearer technical guidance on how to comply with the spirit of the rule, BCAP considers that broadcasters would be in a better position to understand and implement the rule's requirements. Although BCAP agrees that broadcasters could monitor loudness levels of their entire broadcast output through general transmission levels quality controls, the scope of this consultation is restricted to the suitability of the proposed sound levels rule for inclusion in the BCAP TV Advertising Standards Code. BCAP considers that, because audiences set the sound controls of their TVs to match the levels of the programmes they watch, the purpose of the proposed rule is to reduce the irritation caused to audiences by ads that are broadcast at higher subjective loudness levels than programmes. 2.1.2 BCAP considers that further research could help broadcasters successfully integrate subjective loudness meters into their operational processes for monitoring sound levels of their broadcast output. BCAP welcomes the respondents' decision to conduct research into subjective loudness meters and would be interested to hear the results of that	None.

	signatories of this response are currently undertaking this work. Currently certain Broadcasters are attempting to pre-empt OFCOM investigation of strident soundtrack levels by regularly "re-mastering" mixes sent to them after they have been approved by Agency and Advertiser. Some regulation would be welcome to preserve commonality and transparency of all parties working practices regarding level metering, from the studios to the broadcaster and preferably to cover under one single ruling covering level changes programming, advertising, sponsorship idents and continuity – all of which affect perception of each other. Of course this should only be applicable once a new standard has been researched and approved by all parties.		research. Nevertheless, BCAP considers that the proposed rule should replace the existing rule now rather than postponing its inclusion until a time that further research has been commissioned and completed. BCAP considers that the ITU's recommendation is fit for purpose, having been based on extensive and rigorous experimentation and testing. BCAP will, however, undertake to review the rule in future in light of research findings. As stated in BCAP's comments to 1.1.4, BCAP recognises that broadcasters sometimes need to adjust the loudness levels of ads they receive for broadcast if those ads do not comply with the requirements of the sound levels rule on delivery to the broadcaster; but that is not tantamount to broadcasters "re-mastering" approved versions of ads. BCAP considers that those concerns are a matter for discussion between broadcasters, advertisers and ad delivery houses. The Code's remit does not extend to programme material and continuity announcements. Nevertheless, all ads broadcast on Ofcom-licensed channels are subject to the sound levels rule; the rule can also be applied, under rule 9.4 of Ofcom's Broadcasting Code, to sponsorship credits. Because it is intended to ensure a consistent subjective loudness is maintained between ads and programme or junction material, the proposed rule should create a level playing field and reduce the likelihood of one ad being broadcast at a higher subjective loudness level than another.	
ISBA; Wave Recording Studios	2.2 **No.** Points raised in support:	2.2.1	BCAP considers there to be a need for regulatory action because, in discussions held before the consultation and the formulation of the proposed rule, broadcasters expressed concerns that the	None.

	2.2.1 We believe that while this may be an area in which BCAP can advise Ofcom, it is not an issue for BCAP to lead. We note from the consultation document that Ofcom is advising BCAP in this matter, suggesting an apparent and unwarranted reversal in the two organisations' roles and responsibilities. Whether the initiative for this comes from Ofcom or BCAP/ASA is unclear, but we feel that the implied shift of responsibility (and perhaps accountability) is unjustified. 2.2.2 My initial response to this is no. By your own figures there have only been 250 complaints in period of 1 year, apparently of which only 11 have been upheld, and given the viewing figures in the millions, this problem does seem very minor, however in view on changing formats in which content is being viewed and that no matter how small the level of complaints, a problem does exist, we should use this opportunity to investigate and even implement new technologies that are being developed that are more universally suitable to measure sound loudness across the different formats to a singular acceptable scale.	note to the existing rule does not provide them with adequate technical guidance to ensure that the ads they broadcast are at acceptable sound levels. The Memorandum of Understanding, which details the co-regulatory relationship between Ofcom and BCAP, explains that Ofcom recognises BCAP as the "self-" in self-regulation. Ofcom therefore undertakes to exercise its power to implement advertising code changes itself in only exceptional circumstances. BCAP can act in an instance that it considers relates to a matter of advertising content regulation: this is one of those instances. Therefore, under the terms of the Memorandum of Understanding, BCAP as the code-owning body may decide, and has decided, to review one of the Code's existing rules without a mandate from Ofcom. Ofcom has advised BCAP on technical issues. BCAP cannot insist that Ofcom includes a sound levels rule in its Broadcasting Code to cover the entirety of broadcasters' outputs. Although it recognises that jumps in sound levels can occur between, for example, programmes and continuity announcements, BCAP considers there to be a case for regulatory intervention because the incongruity between different loudness levels is most noticeable in the transition from programmes to ads. BCAP understands that audiences usually set their TVs' volume controls according to the sound levels of programmes. Therefore, fluctuations in sound levels during a programme are of minor concern to an audience because they form part of the dramatic context of that programme. The complaints the ASA receives about sound levels typically refer to ads only and not to wider issues of "broadcaster behaviour". Complaints often stem from the disparity between	

			the wide dynamic ranges of programmes and the narrow dynamic ranges of ads and sponsorship credits; for that reason, BCAP considers that the consultation is relevant to BCAP and the need for regulatory action falls within BCAP's scope as the code-owning body. Furthermore, as explained in BCAP's evaluation of 2.1.2, sponsorship credits would be subject to the proposed TV ad sound levels rule under rule 9.4 of the Ofcom Broadcasting Code. 2.2.2 245 complaints in one year is significant, given that they were received under a rule that governs an issue as specific as sound levels. BCAP considers that the complaints received about loud TV ads are representative of an endemic problem. The ITC's *Public View of 2002* research document reported that around 40% of the people asked thought TV ads were often or very often too loud. The difficulty broadcasters face in complying with the existing rule is indicted by the fact that approximately one quarter of the complaints that cited transmission details of ads, channels and times of broadcast were upheld.	
Dolby Laboratories, Inc	2.3 **No comment.**	2.3	No comment.	None.
Confidential respondee	2.4 **Due to the subjective nature of perceived loudness, broadcasters cannot necessarily correlate regulatory action against viewer perception.** Points raised in support: 2.4.1 The audience has ultimate control because they set the volume levels of their own televisions and can even turn off their televisions. Audience	2.4.1	As highlighted in the responses from Broadcast Project Research (1.1.1) and the Institute of Broadcast Sound (1.1.3) to Question 1, and as stated in BCAP's comments to 1.1.1, it is possible to build a subjective loudness meter because audiences usually find the same material loud, regardless of their attitudes to the material itself. BCAP considers that that means it should be possible to use subjective loudness meters to protect audiences from overly loud ads.	None.

	members often complain about the relative loudness of advertisements and programmes, rather than the fact that advertisements are simply too loud.		Furthermore, the second paragraph of the proposed rule acknowledges the fact that there are some factors that affect audiences' perceptions of loudness that are outside broadcasters' control. Although it recognises that audiences have ultimate control over broadcasters in that they can choose to change channels or turn off their TV sets, BCAP considers that it is not reasonable to expect audiences to adjust their sound controls at every ad break. On that basis, BCAP considers that the consultation was targeted at a case in which regulatory action was necessary.	
Red Bee Media; Virgin Media Television and UKTV	2.5 **It is guidance that is required – not regulation.** Points raised in support: 2.5.1 It is reasonable for regulation to be introduced for consistency of loudness measurement methods across the industry e.g. use of ITU –R BC17XX. We do not agree that there can be any formal regulation of commercial loudness alongside programme material on a programme part–by–programme part basis. Regulation per se totally falls down in the operational processes surrounding multi-channel playout environments where the same instance of commercial is played out across several channels with differing loudness profiles.	2.5.1	The TV Advertising Standards Code contains rules to which broadcasters with an Ofcom licence must adhere. BCAP considers it reasonable that the Code should continue to include a rule about the sound levels of TV ads for the reasons set out in Section 4 of the consultation document. The proposed rule retains the main objectives of the existing rule (that ads "must not be excessively noisy or strident" and that their subjective volume must be consistent with adjacent programming) by stating that a consistent subjective loudness must be maintained. BCAP considers, however, that the proposed rule provides broadcasters with more robust technical guidance to help them ensure compliance with the rule. As stated in BCAP's comments to 1.2.2, BCAP agrees that it is not the purpose of the sound levels rule to provide broadcasters with onerous and prescriptive operational procedures: that is one of the reasons why it does not mandate a maximum acceptable level on a subjective loudness meter. Instead, the proposed rule suggests two methods for broadcasters to monitor their compliance with	None.

			the rule: using subjective loudness meters, preferably those that conform to ITU specifications, or ensuring that the peak levels of the ads they broadcast are at least 6dB less than the peak levels of programme material. The proposed rule allows broadcasters to choose between those two methods, and it neither stipulates integration times for those using subjective loudness meters nor states that ads' loudness levels should be set on a programme-part by programme-part basis. The intention of the proposed rule, as it is with the existing rule, is to encourage broadcasters to match the loudness levels of the ads they transmit with the loudness levels of programme material. BCAP considers the way in which that is achieved in a multi-channel environment is, as it currently is, a matter for broadcasters and playout providers.	
Confidential respondee	2.6	**Further investigation and consultation is advisable before implementing a new sound levels rule to take into consideration the newness of the technology available for measuring subjective loudness.**	2.6	As stated in BCAP's comments to 2.1.2, if it were included in the TV Code, BCAP could undertake to review the proposed rule in future to reflect the results of research into the use of subjective loudness meters. BCAP does not consider that including the proposed rule in the Code at this time would be hasty. That is because, as explained in the fourth paragraph of BCAP's comments to 1.2.2, the proposed rule would provide broadcasters with two different methods for ensuring that the sound levels of the ads they broadcast do not exceed excessively noisy levels. If they believe that ITU-conformant subjective loudness meters are, as yet, undeveloped enough for their purposes, broadcasters can opt to continue to use PPMs to comply with the rule.	None.

Q3. Do you agree that subjective loudness meters, preferably those that conform to International Telecommunications Union (ITU) standards, should significantly help broadcasters marry the loudness levels of advertisements relative to the loudness profile of their channels?				
Broadcast Project Research; Dolby Laboratories, Inc; Individual (Mr G.); Individual (Mr H.); Individual (W. H.); Institute of Broadcast Sound; S4C; SCI FI Channel Europe LLC; Virgin Media Television and UKTV; Wave Recording Studios	3.1 **Yes.** Points raised in support: 3.1.1 Yes, but there is not much wrong with the European PPM as a loudness tool unlike the more difficult to use Vu meter. Experience will show if loudness meters (which are still incomplete in specification), can improve matters in un-manned or unskilled operation. 3.1.2 The "loudness profile of a channel" should be less of a consideration than the *actual* loudness profile of the preceding material (*following* material is less relevant) - ideally with some exponential or similar weighting, such that the material broadcast in the immediately preceding minute, say, has the highest weight, then that in the preceding two minutes, and so on. There should also be retained the possibility of (successfully) accusing a broadcaster of deliberately selecting a quiet point (in a film for example) in which to insert the break. 3.1.3 We agree that a loudness meter	3.1.1	BCAP recognises that PPMs form an important part of broadcasters' compliance processes. But, as mentioned by ITN in their response to question 1 (1.3), the note to the existing rule does not provide enough adequate technical guidance about how to use PPMs to monitor loudness levels to all sound operators regardless of their levels of skill. BCAP understands that broadcasters typically use PPMs to check the peak levels of ads, rather than their subjective loudness levels, when ingesting them onto their servers. BCAP considers that the proposed rule is preferable to the existing rule because it encourages broadcasters to use subjective loudness meters, preferably those that conform to ITU standards, to match the loudness levels of ads with the loudness levels of the programmes they broadcast. 3.1.2 Because the ITU has included weighting in its standard, BCAP considers that that does not need to be addressed in the proposed rule. Broadcasters are bound, under their Ofcom licence, by the requirements enshrined in the Television Without	None.

	should assist a broadcaster in marrying the loudness levels of advertisements to the profile of their channel. However, it should be noted that the loudness profile of the channel may be of little use in some circumstances. For example, a channel such as MTV may have a very easily defined loudness profile whereas a channel such as ITV1 will have a loudness profile that varies hugely by day part. Setting levels against an overall average loudness profile for the latter may still leave the problem existing for any individual commercial break. We also question whether the loose prescribing of the ITU standard is helpful. Whilst any standard will assist a broadcaster where the measurements are all relative within one channel it is transmitting, any comparison between channels will only have any meaning if the same standard is stipulated for all. We believe that the ITU standard is the correct one to be chosen as it is well researched and is non-proprietary and, ideally, its use should be mandated. To assist in this it would be helpful if individual broadcasters were mandated to publish the loudness and peak PPM readings they would apply to their channels.		Frontiers Directive and Ofcom's Rules on the Amount and Distribution of Advertising, which clarify the minutage rules on the amount, scheduling and presentation of TV advertising. Broadcasters must ensure that ad breaks are scheduled at times that comply with those rules and at times that do not disrupt the editorial flow of programmes. On that basis, BCAP accepts that ad breaks sometimes occur at quiet parts of programmes: the second paragraph of the proposed rule urges broadcasters to minimise the annoyance that a perceived imbalance in loudness levels can cause audiences when an ad break is taken at a quiet point in a programme. 3.1.3 BCAP understands that broadcasters' 'loudness profiles' – or the average loudness levels of all broadcast output – vary by channel and by time of day on individual channels. The proposed rule encourages broadcasters to use subjective loudness meters at their discretion to match loudness levels of ads and programmes; BCAP considers that the proposed rule is not overly prescriptive because it does not state that balancing of loudness levels should be carried out on a programme-part by programme-part basis. The proposed rule, therefore, would allow broadcasters to decide how much of their broadcast material they should use to assess where a	

	3.1.4	We believe that loudness meters should be used in conjunction with PPMs. As loudness meters work on an average measurement, short bursts of loudness may not always register, and therefore a second pass through a PPM is required.	suitable loudness level lies for ads. BCAP considers that, at this stage, it is proportionate to *encourage* broadcasters to use subjective loudness meters that conform to ITU standards but not to *insist* that they are used. That is because, as outlined in BCAP's comments to 1.2.2, BCAP considers it would be too soon, given that the ITU recommendations have only recently been standardised, to expect broadcasters to rely entirely on loudness meters to monitor sound levels of the ads they broadcast. As stated in BCAP's comments to 1.1.4, BCAP could not seek to regulate the working relationships between broadcasters, advertisers, agencies and sound studios. For that reason, BCAP considers that it is not its role to insist broadcasters publish details of their average loudness levels. 3.1.4 As stated in BCAP's comments to 3.1.1, BCAP understands that broadcasters typically use PPMs to check the peak levels of ads at the ingestion stage to guard against distortion caused by short-term peaks. Nevertheless, the proposed rule would allow broadcasters to choose to monitor their compliance either by using subjective loudness meters, preferably those that conform to ITU	

			standards, or by using PPMs to ensure that the ads they broadcast peak no higher than 6dB less than the maximum level of programmes. BCAP considers that it is not necessary for broadcasters to be able to demonstrate that they have used both types of meter – subjective loudness meter and PPM – as part of their compliance processes.	
Confidential respondee; Confidential respondee; Red Bee Media;	3.2 **Yes, with reservations** Points raised in support: 3.2.1 Although subjective loudness meters can help to smooth out loudness peaks, the ITU recommendations are new and have not yet been used in the manufacture of many loudness meters. Subjective loudness meters are intended to reflect the average human ear but much of the audience will not have an average ear. Subjective loudness meters, then, can be only a guide (recognised in paragraph 3.6 of the consultation document). Subjective loudness meters would not be helpful in instances where advertisements are especially quiet for deliberate effect. It is not possible to know, at the time of ingesting an advertisement for broadcast, what type of other	3.2.1	BCAP understands that there are many factors that affect an audience's perceptions of loudness that are outside of broadcasters' control. As mentioned in BCAP's comments to 1.1.1, however, BCAP considers that it is possible to build subjective loudness meters because, as explained by Broadcast Project Research (1.1.1) and the Institute of Broadcast Sound (1.1.3), most people share similar attitudes to loudness. On that basis, although it accepts that a proportion of an audience will not have an 'average ear', BCAP considers that the proposed rule would allow broadcasters to set suitable sound levels for the ads they broadcast by using subjective loudness meters that conform to ITU standard. The proposed rule was intended neither to result in all ads being consistently loud nor to preclude advertisers from using quieter material for dramatic effect. BCAP	The maximum subjective loudness of advertisements must be consistent and in line with the maximum loudness of programmes and junction material. ~~A consistent subjective loudness must be maintained between individual advertisements and between the advertisements and programme and other junction material.~~

		advertisement or programme content will be broadcast either side of it. The consultation document talks about "loudness profiles". The loudness profile of some channels constantly varies depending on the programmes broadcast. It would not be realistic or editorially acceptable to expect broadcasters to alter the levels of programmes to match advertisements, which have much narrower ranges. There are significant differences between the "loudness profiles" of different channels on the Freeview, Sky and Virgin Media platforms. If, under the proposed rule, broadcasters are expected to adjust their channels' overall loudness levels, there would be larger level differences between channels. That would mean the audience having to re-set their volume controls every time they change channel.	considers that a broadcaster could broadcast different ads, all with different average loudness levels, in the same ad break and comply with the proposed rule, providing either that none of the ads peaked over the maximum PPM level stated in the rule or that the broadcaster monitored loudness levels with a subjective loudness meter. For clarity, however, BCAP recommends making a drafting change to the proposed rule. As stated in BCAP's comments to 3.1.3, BCAP recognises that a channel's loudness profile is likely to vary throughout the day. BCAP understands that broadcasters typically aim for most of their programming to be broadcast with similar average loudness levels or within a similar loudness range. It is those average loudness levels to which the proposed rule urges broadcasters to match the loudness levels of ads by using a subjective loudness meter.	
	3.2.2	Any agreed standard needs to include parameters such as integration time.	BCAP has used the term "loudness profile" to describe the average sound levels of all the material broadcast on a channel. BCAP, therefore, would not expect broadcasters to change those average sound levels as a result of the proposed rule. Instead, BCAP considers that the proposed rule expects broadcasters to understand the average loudness	
	3.2.3	If each channel had its own loudness profile, the result could be a perceived difference in level between an advertisement broadcast on one channel and that		

	same advertisement broadcast on another channel.		levels of all the material they broadcast and to be sympathetic to those levels when broadcasting ads to ensure that the ads' average loudness levels as closely as possible match the average loudness levels of all other broadcast material. Furthermore, the proposed rule acknowledges the fact that ad breaks sometimes occur during quiet points in programmes. BCAP agrees that there are differences between the average loudness levels of neighbouring channels but considers that the proposed rule would not affect that. As already clarified, the proposed rule does not require broadcasters to alter the sound levels of the material they broadcast other than ads. As highlighted in BCAP's comments to 2.5.1, multi-channel broadcasters and playout providers are already committed, by their Ofcom licences, to complying with the sound levels rule across all of their channels.	
		3.2.2	BCAP understands that the ITU is in the process of considering a suitable integration time and that a value will be included in the standard in due course. The value currently under consideration is 4 seconds.	
		3.2.3	BCAP agrees that, as stated in the comments to 2.5.1, the loudness	

			levels of an ad that is broadcast on different channels might have to be adjusted to take account of the channels' varying loudness profiles.	
Grand Central Sound Studios, 750mph and the Jungle Group (comprising Jungle, Zoo and Marmalade Studios); Mere Mortals Post Production	3.3 **No.** Points raised in support: 3.3.1 No - we do not agree. Using loudness meters only on the commercials will help balance individual commercials against other commercials. Whilst commendable on its own it would not help eliminate the jump in levels between programmes and the commercial break. Since the Broadcasters do not currently have loudness profiles for their channels, we don't agree that implementing the ITU spec loudness meter would actually change anything, as there is nothing to measure the results against. There is a very real concern that the concept of a loudness profile of a television channel is impractical. Unlike commercial radio, most television stations and particularly the PSBs have a vast array of different content styles and dynamic signatures. To fit into all of these types of programme is a very tall order.	3.3.1	The intention of the proposed rule is not that broadcasters should use subjective loudness meters to monitor the loudness levels between individual ads only but rather that "a consistent subjective loudness must be maintained *between the advertisements and programme and other junction material*". BCAP considers, therefore, that the proposed rule would help minimise a jump in loudness levels between programmes and ads. Cf. BCAP's comments to 3.2.1. BCAP would not expect broadcasters to change the average sound levels of their broadcast output as a result of the proposed rule. The first of the three scenarios suggested in 3.3.1 is outside of the scope of this consultation and BCAP and ASA(B)'s remit: BCAP could not include requirements in the sound levels rule that were applicable to all points in the post-production chain. The second scenario, however, identifies the desired effect of the proposed rule: that broadcasters are encouraged to use loudness meters to ensure consistency in loudness	None.

	However, there are three scenarios to deal with the potentially conflicting pressures of Advertiser satisfaction and Audience comfort levels, two of which would include loudness meters. 1. Loudness metering (of a yet to be approved specification – currently most likely BS1770) could be applied at all points in the post-production and broadcasting chain - which would require the Broadcasters to meter their station output and bring in the advertising breaks at an adjusted level relative to the outgoing programming. All advertisements would need to be mixed with a predefined maximum loudness level in mind and would therefore never exceed the loudness level of the programming. 2. The studios could adopt a loudness meter (as per option one), which the Broadcasters would also use, but only to pre-master all advertising breaks. This might slightly improve the issue of any overly compressed advertisement soundtracks feeling louder than others in the break, particularly if one of these comes in directly after a quiet section of outgoing programming, but it would never entirely rule out the possibility of a mismatch during	levels between the ads and programmes they broadcast. Again, the third scenario is also addressed by the proposed rule, which gives broadcasters the option of using PPMs to check that the peak levels of ads are at least 6dB less that the maximum level of the programmes. The proposed rule clarifies that, given normal convention for analogue audio is that programmes' peak levels are no higher than PPM 6, ads should not peak over PPM 4.5. BCAP considers that the respondents' suggested peak of PPM 5 would, in most cases, result in ads sounding louder to audiences than surrounding programme material, particularly given that the existing rule restricts "highly compressed" ads to a maximum peak of PPM 4. BCAP proposed that broadcasters work to a normal peak level for ads of no more than 6dB less than programmes' peak because it is an approximation, albeit an unsophisticated one, of the difference in average loudness levels between compressed and uncompressed material. That proposal, which recognises the fact that most ads are compressed to some degree or have naturally narrow dynamic ranges, was made after pre-consultation with broadcasters and playout providers. BCAP considers that the proposed rule is more flexible than the existing	

		transition into a commercial break. This would only be fully dealt with by option one. 3. If loudness metering proved unacceptable to the Broadcasters, an adjusted PPM metering level might be agreed upon. This would be a "best guess" solution only, opting for a lowered peak level to allow for the compression usually applied to advertisements. Currently the post-production studios would suggest a 5ppm peak level (or 4dB below Station peak level) as most advertising has an average of 4dB dynamic range reduction at the compression stage. The studios (and almost certainly the Advertisers) feel that 4.5ppm is unnecessarily low as 6dB of gain reduction equates to a perceived halving of volume. This 5ppm option would still result in commercials sounding quiet (on well mixed dynamic commercials) next to "loud" programming such as Chart Shows or Saturday Night variety, as some of these types of programme are mixed with similar levels of compression to an advertisement and will peak to 6ppm. The 4.5ppm rule would also encourage some studios to over compress/crush the sound completely, which would make their commercials actually sound louder. Also it should be		rule because it does not stipulate a 'rigid' peak level but instead relates peak levels of ads to peak levels of programmes in an attempt to marry the loudness levels of both. As explained in BCAP's comments to 1.2.3, BCAP does not consider that the proposed rule would result in more ads being compressed. 3.3.2 The proposed rule does not include a reference to LEQ metering; it encourages broadcasters to use subjective loudness meters that conform to ITU standards. As stated in BCAP's comments to 1.1.1, BCAP considers that it is possible to build subjective loudness meters that can objectively measure loudness levels. On that basis, the proposed rule stipulates that broadcasters must maintain consistent subjective loudness levels regardless of the amount of compression applied to the soundtracks of ads in the same ad break.	

	considered that with any PPM rule, that all Broadcasters have their own transmission levels and a hard PPM rule of any kind might not fit in with their own stations technical final broadcast level. In the cases of options 1 and 2, further research and recommendation would have to be done to approve the specifications of the loudness meter plus the actual loudness maximum figure itself before it could be stipulated as an industry standard. As previously stated, only option one would properly dovetail levels in and out of commercial breaks and option two is simply to address the lesser issue of the occasional commercial that "stands out". 3.3.2 I do not agree that subjective loudness meters will work in this case. In my experience of LEQ meters, which measure dynamic range against time, a heavily compressed mix once reduced to the specified loudness equivalent is perceivably a lot quieter than that of an uncompressed mix with a much wider dynamic range. This leads to commercials of varying perceived loudness, which brings us back to square 1.		
Incorporated Society of British	3.4 **No comment.**	3.4 No comment.	None.

Advertisers			
ITN Ltd	3.5 **If a change to metering is due it is essential that ALL British Broadcasters are forced to comply with the same rules and guidelines.**	3.5 Broadcasters licensed by Ofcom are required to comply with the BCAP TV Advertising Standards Code. On that basis, all broadcasters would be subject to the proposed rule if it were included in the Code.	None.

Q4. Do you agree that, because the proposed rule sets a clear maximum sound level and is explicit about the requirement to maintain a consistent subjective loudness level between advertisements, the proposed wording gives greater certainty to broadcasters to help them comply with the rule?			
Broadcast Project Research; Dolby Laboratories, Inc; Individual (Mr H,); Individual (W. H.); ITN Ltd; Mere Mortals Post Production; S4C	4.1 **Yes.** Points raised in support: 4.1.1 Yes, but the sound of a highly compressed (but perfectly valid) Rock and Roll recording butted up against a high dynamic advertisement at equal loudness will sound unnatural, and could end up causing an equal viewer discomfort to the current case. 4.1.2 We would like to see the wording relating to the use of loudness level meters conforming to the ITU specification made stronger. We would like to see the wording of the third sentence modified as the use of 'limited' the first time it appears in the sentence could be interpreted as being related to compressor-limiter devices use of which might have exactly the opposite effect to that desired. Indeed, the word limited is used in exactly this context in the same sentence.	4.1.1 As stated in BCAP's comments to 2.1.1, BCAP recognises that audiences set the sound controls of their TVs to match the levels of the programmes they watch. The purpose of the proposed rule is to reduce the irritation caused to audiences by ads that are broadcast at higher subjective loudness levels than programmes. 4.1.2 Cf. the second paragraph of BCAP's comments to 3.1.3, which explains why, at this stage, BCAP considers it disproportionate to mandate the use of subjective loudness meters that conform to ITU standards. BCAP agrees that the word "limited" could be interpreted in a way other than BCAP intended. On that basis, BCAP recommends a drafting change to the proposed rule.	If a peak-reading meter is used instead, the maximum level of the advertisements must be ~~limited to~~ at least 6dB less than the maximum level of the programmes to take account of the limited dynamic range exhibited by most advertisements.
Confidential respondee; Grand Central Sound Studios, 750mph and the	**4.2 No.** Points raised in support: 4.2.1 The fact that the proposed rule is	4.2.1 Cf. the third paragraph of BCAP's comments to 1.2.3 and BCAP's comments to 1.2.2. BCAP considers that the proposed rule	None.

Jungle Group (comprising Jungle, Zoo and Marmalade Studios); Red Bee Media; Virgin Media Television and UKTV; Wave Recording Studios		explicit in its aims does not mean that it is helpful. Pegging a maximum peak level at 4.5 PPM will most likely result in more heavily compressed commercials, to compensate for effectively a halving of volume across the board. This could in turn lead to many of these over compressed commercials sound louder than they currently now are, and less compressed commercials sounding quieter. The Q4 talks about 'consistent subjective loudness' being achieved by only reference to a maximum level as measured on a PPM scale. It is unlikely to do this but if it did it would be at the expense of Ad breaks becoming a 'wall of sound'. This is would be the worst possible result for all parties Advertisers, Broadcasters and the Public. Although recommending the ITU spec, the proposed rule goes no further in suggesting a maximum level or even a workable scale. 4.2.2 There is a disconnect between an advertisement's subjective loudness and its peak loudness. The proposed rule would restrict all advertisements, regardless of the amount of compression applied to their soundtracks, to a peak of PPM 4.5. But an advertisement with little or no compression applied to its		does not refer to "consistent subjective loudness" being maintained through use of PPMs *only*: the rule provides broadcasters with two options for monitoring their compliance. 4.2.2 BCAP considers that the proposed rule would not limit all ads to a peak of PPM 4.5 *per se*. That is because the proposed rule gives broadcasters the choice of using PMMs *or* subjective loudness meters to ensure that the ads they broadcast do not exceed acceptable levels. If a broadcaster used a subjective loudness meter, and could explain to the ASA how they used it to maintain consistent loudness levels between ads and programmes in the case of a complaint, the proposed rule implicitly allows an ad to peak over PPM 4.5 if the ad had little or no compression applied to its soundtrack and if it matched the general loudness levels of surrounding programme material. As stated in BCAP's comments to 3.3.1, BCAP proposed that broadcasters should work to a normal peak level for ads of no more than 6dB less than programmes' peak if using a PPM to monitor loudness levels. That reduction in peak levels is an approximation, albeit an unsophisticated one, of the difference in average loudness levels between compressed and uncompressed material.	

	soundtrack would need to peak at a higher level for it to be consistent with the subjective loudness of programmes and other advertisements in the same break. Therefore regulating the maximum loudness of advertisements will not necessarily lead to a consistent subjective loudness with surrounding material. Advertisers are within their rights to create impact by, for example, using silence in their advertisements The proposed rule stipulates a maximum peak of PPM 4.5, which is higher than the note to the existing rule ("material which is more highly compressed must not exceed 0dBm" or PPM 4). That is likely to lead to compressed advertisements sounding louder to audiences. 4.2.3 There is a clear inconsistency between using loudness measuring and the suggested peak of PPM 4.5 except for non-highly-compressed commercials. Further, the term 'consistent' needs qualification with relation to over what period of time. Over-prescription relating to commercial levels on a programme part by programme part basis is commercially unimplementable.	Cf. the second paragraph of BCAP's comments to 3.2.1 and the recommended drafting change. Cf. paragraphs 6.1 to 6.6 of the consultation document for BCAP's explanation of why it has proposed a maximum peak level of PPM 4.5. 4.2.3 Again, as stated in BCAP's comments to 1.2.2, the proposed rule provides broadcasters with *two* options for monitoring compliance: using subjective loudness meters, preferably those that conform to ITU standards, or using PPMs to ensure that the ads they broadcast peak no higher than 6dB less than the maximum level of programmes. BCAP considers that it would be overly prescriptive to define a time period over which programme loudness levels should be measured and used as a basis to set ads' loudness levels. Cf. the first paragraph of BCAP's comments to 3.1.3.	

Confidential respondee; Individual (Mr G.); ISBA; SCI FI Channel Europe LLC	**4.3 Partially.** Points raised in support: 4.3.1 The requirement to keep a subjective level between individual advertisements is good; the absolute maximum is less 4.3.2 Taken literally and narrowly, yes. But in the wider context, a rule which only requires a consistent subjective loudness level between advertisements effectively singles them out whilst failing to address the more important issue of acceptable levels of consistency across all broadcast output. 4.3.3 The proposed ruling does set out a clear maximum level and will help broadcasters comply with maintaining consistent subjective loudness levels between advertisements. However, maintaining consistency on transitions between breaks and programmes would not be possible without losing the desired dynamic range of the programmes' content. 4.3.4 The proposed rule, although offering broadcasters more certainty, is a blunt method and could cause more advertisements to have compressed soundtracks.	4.3.1 BCAP considers it necessary to retain a reference to a maximum peak level in recognition of the fact that broadcasters have used PPMs as part of their compliance processes for decades. BCAP considers, however, that the proposed rule is more flexible than the existing rule because it does not stipulate a 'rigid' peak level but instead relates peak levels of ads to peak levels of programmes in an attempt to marry the loudness levels of both. 4.3.2 Cf. BCAP's comments to 2.1.1. 4.3.3 As stated in the fourth paragraph of BCAP's comments to 3.2.1, BCAP considers that the effect of the proposed rule would not be that broadcasters feel compelled to change the average sound levels of the programmes they broadcast, or to make changes to their dynamic range. 4.3.4 Cf. the third paragraph of BCAP's comments to 1.2.3.	None.

Q5. Do you agree that the proposed rule is preferable to the existing rule 6.9 (Sound levels in advertisements) by giving clearer guidance to broadcasters to help them comply with the rule and, as a consequence, better protect the audience from unduly loud advertisements? Should the proposed rule be included in the BCAP Television Advertising Standards Code?			
Dolby Laboratories, Inc; Individual (Mr G.); Individual (Mr H.); Individual (W. H.); Institute of Broadcast Sound; ITN Ltd; Mere Mortals Post Production; S4C; SCI FI Channel Europe LLC	5.1 **Yes.** Points raised in support: 5.1.1 It is worth noting that the consultation and proposed rule makes reference to the relationship +2dBm ≡ 4.5PPM ≡ -16dBFS. It should be noted that this is only true for steady state signals. A PPM is a quasi-peak meter and will under read the peak level of short transients. For non-steady state signals, it is possible for two signals to peak at the same value on a PPM meter, while peaking at different values on a digital peak meter if equivalent ballistics to a PPM meter are not applied to the digital meter.	5.1.1 BCAP recognises that the PPM (in common with any ballistic meter) potentially under-reads the levels of short transient peaks. However, the PPM is in widespread use across industry and for consistency the footnote to Rule 6.9 specifies that if peak reading meters are used, they should conform to Type IIa as specified in BS6840: Part 10, Programme Level Meters.	None.
Confidential respondee; Confidential respondee; Grand Central Sound Studios, 750mph and the Jungle Group (comprising Jungle, Zoo and Marmalade Studios); ISBA; Red Bee Media; Virgin Media Television and UKTV; Wave Recording Studios	5.2 **No.** Points raised in support: 5.2.1 Rather than seeking to impose an immediate "solution" which will not be effective for the technical reasons given above, we should propose that BCAP work collectively with the broadcasters and sound studios, testing the ITU spec loudness meter alongside the PPM over as short a period of time as possible, to reach a recommendation which would satisfy all concerned. At this point there would need to be a decision reached as to how a loudness meter would be integrated into the audio chain.	5.2.1 Cf. the first paragraph of BCAP's comments to 2.1.2. 5.2.2 BCAP considers that the section of the proposed rule quoted addresses the concerns raised: by recognising that ad breaks sometimes occur at especially quiet points in programmes, the proposed rule acknowledges that the are factors that affect audiences' perceptions of loudness that fall outside broadcasters' control. The proposed rule urges broadcasters to strive to minimise the annoyance that can be caused to audiences by jumps in sound levels at ad breaks but reflects the fact that it may not be possible to maintain consistent subjective loudness levels on a programme-part by programme-part basis.	None.

	Pan-industry meetings on this subject have already been held under the auspices of the IPA, at which all the broadcasters and main sound studios were represented. These revealed that all the parties were united in their desire to seek an effective remedy to the current problem. In this context – and despite being rivals in our field of work – Grand Central, The Jungle Group and 750mph have been working together, testing the ITU spec loudness meter across commercials from both our studios as well as others. The initial results show the meter does catch the odd commercial that is over compressed or mismatched on the PPM scale. We should like to complete this work and agree with BCAP and the broadcasters, how these finding should be implemented. 5.2.2 The proposed rule does not make allowances for the fact that the end of one programme segment may be dynamically different from the beginning of the next. If a broadcaster adjusted sound levels during a break in an attempt to comply with the rule, the likely result would be the broadcaster disadvantaging some advertisers, failing to ensure a level playing field across the loudness levels of all advertisements in a single break and failing to reduce the need for viewers to adjust their volume controls. The existing rule should therefore be retained. 5.2.3 The rule should reflect that the vast majority of broadcasters/playout providers will migrate to file delivery of commercials. It therefore needs the buy-in of commercials supply houses e.g. IMD / Adstream (other supply houses are available).	5.2.3 BCAP invited IMD and Adstream to respond to this consultation; neither responded.	

Broadcast Project Research	5.3	**Only if account is taken of the overall signal path to and in the Digital Home.**	5.3	Cf. the second paragraph of BCAP's comments to 2.1.1.	None.