The term 'single bonded connection' is not well-defined in this document. Can this term be clarified with examples or additional details? For example, are WLAN MIMO, inter-band LTE ULCA, and intra-band LTE ULCA considered 'single bonded connections,' and why or why not?

The sections referenced for the Tcoil test methods are only applicable for the 2011 standard. For the 2019 standard, the correct section references are 6.3.3 and 6.3.4, respectively.

This section should be 6.a.

The last sentence of this section gives clarity about which Conversational Gain (CG) value must be shown for use with a Hearing Aid, but there is no clarity given for the CG value which must be shown for use without a Hearing Aid. Adding clarifying text which states 'The actual conversational gain displayed with and without a hearing aid...' is suggested.

The term 'foldable phone' is unclear and could lead to confusion. Does this term include any phones with a hinge-like mechanism? Would sliding phones (including the rotating mechanism of 'Sidekick' model phones from the past) be considered folding phones? Would older style clamshell-style phones (e.g. the original Motorola Razr from the early 2000s) also be considered foldable phones? What amount of physical device shape changing is the threshold for folding?

There seems to be a lack of clarity between the requirements of clause 8.h and clauses 8.1 and 8.m. Clauses 8.1 and 8.m indicate that any 'support' for held-to-ear calls is enough to require testing, while clause 8.h indicates a weaker requirement that only 'typical' held-to-ear handsets must be tested. Clause 8.h seems to obviate the possibility of a device which can be held to the ear in certain scenarios which are not tested, so long as it is clear that those omitted scenarios are not 'typical' for being held to the ear. The relationship between these clauses should be clarified to avoid confusion, especially since clause 8.1 mentions a device position change which could be confused with folding position changes (i.e., the example in 8.h of extendable keyboard seems to blur the line between 'foldable phones' and 'non-foldable phones which can change position').

Additional general note that 'rating'-based language may be confusing or incorrect in the future. Some references to 'ratings' may be better if updated to reference something like 'pass or fail result.'

The referenced document seems to indicate that the set of VoIP services which use 16dBm0 as the speech input level is strictly limited to the modes listed (i.e. VoLTE, VoWIFI, and VoIMS). Additional clarity may be useful in preventing labs from misinterpreting and using -16dBm0 for other modes (e.g. OTT VoIP apps like Google Duo). Also, explicit clarification that VoNR falls under 'VoIMS' may be helpful.

In the updated D03 for this KDB (D03 v06), clarification is provided that Tcfc testing for VoWiFi under C63.19-2019 shall use a speech input level of -16dBm0 (as specified in C63.19-2019); however Q7 of D03 v05 indicates that 'Wi-Fi calling is not defined by ANSI C63.19 and therefore shall use a reference level of -20dBm0.' These two pieces of information seem diametrically opposed and need clarification. Since the definition of 'Wi-Fi calling' in Q7 seems synonymous with VoWiFi, it is suggested to specify in Q7 that C63.19-2011 does not define a speech input level for VoWiFi while C63.19-2019 does define a speech input level. Further clarification of the correct speech input level to use for C63.19-2019 testing is also suggested.

The answer for this question has some confusing parts. In 6.1.1, the term 'ABM1LTE' is used but there is not a corresponding term for OTT testing. Suggest replacing 'ABM1LTE' with 'ABM1656G' which covers both the LTE and the OTT case. In 6.1.1, the parenthetical remark will be more clear if it includes step 3 in the comment as well (assuming the above item in this list is accepted). There is no explicit mention of applicability of the interim procedure for VoNR operations, but there is mention of using VoLTE for the interim procedures. The logical conclusion is that VoNR can be tested using the interim procedures as well, so an explicit statement confirming such a conclusion may be helpful.

This paragraph is written such that a grammatically valid interpretation would be that handsets with 'alternative audio functions' (e.g. 'automatic gain control') do not need to meet any of the Volume Control requirements at all. However, it seems that the intention was only to exclude those special functions from Volume Control testing. Clarification may be needed to prevent misinterpretation.

The first two sentences in this paragraph use the word 'should' which is not normative. Grammatically, this section does not require that a separate Volume Control Report be submitted or that a summary data table is included in the forward. Replacing the word 'should' with 'shall' is recommended to make the sentences normative requirements instead of suggestions/recommendations.

Number 3 in the list of information to be included in the Volume Control report indicates units of dB SPL. Most of these units be used in addition to the units of Conversational Gain which are specified in TIA-5050. Moreover, dB SPL is absolute units (due to a fixed reference point) whereas a 'gain' is typically a relative measurement, so dB SPL values are typically considered absolute values, not gain values. This item may be more intuitive if the units required are dB of Conversational Gain instead of dB SPL.

Historically, graphical data with a single, numerical margin has been acceptable for Tcfc frequency response testing. so we wonder if such presentation may be acceptable for Volume Control FR testing as well. Tabulated data in 12th octave bands is a lot of raw, numerical data for a reviewer to look at or sift through during review.

Many devices do not show numerical representations of volume level. Some show a series of 'notches' or 'bars' which could be counted during testing to find a percentage (e.g. 9 volume bars out of 10 would be 90% volume), but some devices feature a much more granular 'slider' to set the volume (i.e. a setting akin to a physical rotary knob). For such devices with difficult to quantify volume settings, is it the responsibility of the manufacturer to provide a clear way to quantify the volume setting?

The equation cited in this item of the list is mathematically wrong. The equation does match the equation as stated in the TIA-5050 standard, but the standard lists a mathematically incorrect equation. The correct equation would be: 

Conversational Gain = [measured dB SPL Level - 70dB] dB

Note the change in the '70dB' term which is written as \(-70\text{dB SPL}\) in the standard and draft KDB.

There are several minor typographical errors which should be addressed. A full list of identified errors is not included here, but can be provided.