

Comments on Proposed Revision of OMB Circular No. A-119:
**“Federal Participation in the Development and Use of Voluntary Consensus Standards
and in Conformity Assessment Activities”**

Comments by:

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Mr. Howard Shelanski
Administrator
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Dear Mr. Shelanski,

Warning Regarding the Flaws of Voluntary Consensus Standards
And the Degradation of ANSI’s Accreditation of Standards Developers

A) Overview

[1] The Revised Circular emphasizes the preference for using the so-called “voluntary consensus standards”. Unfortunately, developments since the 1998 version of the Circular was issued militate against that general directive as many standards became devoid of expert opinion, and some even degenerated into including material that is both hazardous and technically invalid. That negative change was apparently driven by control of the standards-making process of some not-for-profit institutions by for-profit corporations that are seeking to advance their monopolistic interests, thus stifling competition in the market place. I say the above based on about 25 years of involvement in the development of standards, including taking one major standards developer to court over the corruption of its process. I kindly urge OMB to strengthen the following provisions of the Circular:

- a) The exemption that permits government agencies not to use the so-called “voluntary consensus standards” where they are suspected of violating antitrust law, failing to guard public safety, or are technically mediocre.
- b) The obligation that government agencies thoroughly review any standard before adopting it, and that the public be invited to comment as a part of that review.

The matter is discussed in more detail hereafter.

B) General

[2] I joined the Institute of Electrical and Electronics Engineers (“IEEE”) in 1979, and was elevated to the grade of Fellow of the IEEE, which is its highest grade of Membership, in 1995. The IEEE, which is incorporated in the State of New York, is a not-for-profit transnational corporation having about 430,000 members in more than 160 countries, including Canada.

[3] The journals of the IEEE cover all aspects of electrical and electronics engineering and have been known for their excellence because of the rigorous peer review process to which manuscripts are subjected before being published. The IEEE also publishes about 1400 standards. In the past, those standards used to be authoritative documents that embodied the opinions of the experts of the IEEE.

[4] I am an expert in lightning protection, having got my Ph.D. from the University of British Columbia in that subject in 1986. I published my first paper on lightning protection in a journal of the IEEE in 1976, and have so far published over 145 papers and discussions. I am also a co-moderator of the Yahoo Lightning Protection forum which has over 3,180 members worldwide. I have also participated in developing standards of the IEEE over a period of about 25 years.

[5] In view of the above, I have been an insider to the workings of the IEEE. While the journals of the IEEE continued their tradition of excellence, the standards program of the IEEE badly degenerated to the point of sanctioning a lightning protection design method that is both hazardous and technically invalid. This was done at the behest of a manufacturer, the objective being to promote the sale of its products.

[6] The above incident led to a dispute between the administrators of the IEEE and its lightning experts, including myself, that has been going on since 2006. After all attempts to resolve the matter internally failed, I launched legal action against the IEEE in the Supreme Court of British Columbia (Case No. S-135534).

[7] I am a retired 71 years old engineer with no financial interest in the matter whatsoever, and I am only seeking to protect public safety and uphold true science. As such, I had to be self-represented in that litigation. Using its huge financial resources (the 2012 income of the IEEE was \$406 Million), the IEEE hired top-notch lawyers and used them to defeat me on technicalities. But I have not given up and the matter is now before the Court of Appeal for British Columbia (Case No. CA041631).

[8] The above dispute arose from IEEE Standard 998 - *Guide for Direct Lightning Stroke Shielding of Substations*. However, my related investigations revealed that the process itself which is used by the IEEE has been corrupted. This casts doubt regarding the validity of the whole standards program of the IEEE which includes about 1400 documents.

[9] While the above corruption of the process was taking place, the IEEE continued to pay lip service to its proclaimed ideals of due process: transparency, openness, impartial processing

of appeals, and consensus. On the other hand, the documented conduct of the IEEE establishes that:

- a) Standard 998 was declared to have met the IEEE's consensus requirements despite being widely opposed by the lightning experts of the IEEE itself, as well as worldwide.
- b) The IEEE refused to concede that fair notice of this standards development project was not given despite receiving complaints from a large number of affected persons to the contrary.
- c) The IEEE systematically circumvented the obligation to provide fair notice by allowing late changes to the scope and/or the purpose of the standard development project. Such changes were sometimes permitted after preparation of the draft standard has already been completed.
- d) The IEEE was apparently bent on defeating all appeals and it did so by:
 - i) Refusing to hear any technical appeals;
 - ii) Refusing to hold hearings into many of the procedural grounds for appeal,
 - iii) Using its appointed hearing panels to declare that the appellants did not meet their burden of proof;
 - iv) Refusing to grant meaningful remedies when it became indisputable that its rules have been violated.
 - v) Changing the rules retroactively to frustrate the appellants
- e) The IEEE falsely claimed that it will do a safety review of the document before adopting it. It only admitted that it does do any safety reviews after it has already approved Standard 998. This allowed the processing of the impugned document to continue for about 22 months under the shadow of this lie.
- f) As a designated ANSI standard, the draft of IEEE 998 was assumed to be opened for public comments and thereafter submitted to the ANSI Board of Standards Review ("BSR"). This would have caused the draft to fail because of the wide opposition by lightning experts and affected parties. The IEEE frustrated the opponents by dropping the ANSI status of IEEE 998.

[10] In attempting to resolve the dispute with the IEEE, I complained to ANSI (American National Standards Institute). ANSI's response was most disappointing as it turned out to be a federation of standards developers rather than an independent watchdog. I further discovered that ANSI itself sanctioned the procedural changes which made it possible to corrupt the process of the IEEE. This raises suspicion that other Accredited Standards Developers may have been doing same as the IEEE.

C) How the Process of the IEEE was corrupted

[11] The problem started in 1998 when IEEE Standards Association (“IEEE-SA”) was formed, and the IEEE delegated the administration of its standards to it. Since then, only the members of IEEE-SA are entitled to join the ballot group which decide whether a document should be designated a standard of the IEEE.

[12] Unlike the IEEE which only qualified individuals can join, membership in IEEE-SA is open to both individuals and corporations, and there are no qualification requirements for individuals who wish to join.

[13] Despite the IEEE being a not-for-profit corporation that claims exemption from income taxes, corporate membership in IEEE-SA is open to both for-profit and not-for-profit corporations, and for-profit corporations actually control the Board of Governors of IEEE-SA, its Standards Board, and the Committees of that Standards Board.

[14] Membership in IEEE-SA requires paying annual membership fees. Hence a member of the IEEE cannot vote on standards of the IEEE unless he pays an additional fee to IEEE-SA.

[15] Further to the above, IEEE-SA allows non-members to join its ballot groups upon paying per-ballot fees.

[16] The IEEE allows any interested person to comment on its standards, but that is a hollow formality as only the opinions of members of its ballot group, i.e. “the paying customers”, are taken into consideration in deciding whether a draft standard achieved adequate consensus.

[17] Membership in the IEEE is subject to a basic annual fee plus additional fees for the following:

- a) Each technical society which the member also wishes to join, and;
- b) Each technical journal which the member wishes to subscribe to.

Being technically-oriented, most members of the IEEE would rather spend any additional available funds on joining another technical society or subscribing to an additional journal, rather than joining IEEE-SA which is a purely administrative entity.

[18] As a result of the above, participation in IEEE-SA by members of the IEEE dropped to less than 2%. This can be seen from Table 1 which gives a comparison between the membership of the IEEE and IEEE-SA.

[19] The essence of the above is that the IEEE created a standards administration system which is characterized by the following:

- a) About 98% of members of the IEEE have no say regarding whether a document should be designated a standard of their Institute;
- b) Non-members of the IEEE are given a say regarding whether a document should be designated a standard of the IEEE;

- c) Those who have voting rights regarding standards of the IEEE acquired these by paying fees to IEEE-SA, either as annual membership fees or per-ballot fees, and without any requirement regarding competence in the subject technical matters;
- d) As a result of the above, it has been a fraudulent misrepresentation of unprecedented magnitude that the prestigious logo of the IEEE, which implies technical excellence in the minds of the public, is being placed on the documents that are issued by IEEE-SA.
- e) The above corruption started back in 1998 when IEEE-SA was formed.

Table1. Comparison of the Memberships of the IEEE & IEEE-SA

Year	IEEE	Individual IEEE-SA	IEEE-SA in % of IEEE	Corporate IEEE-SA
2012	429,085	7,099	1.65%	202
2011	415,989	7,334	1.76%	205
2010	407,541	7,099	1.74%	205
2009	397,001	7,141	1.80%	114
2008	382,400	7,383	1.93%	132
2007	376,003	8,005	2.13%	77
2006	374,739	7,984	2.13%	70
2005	367,395	8,012	2.18%	76
2004	365,483	8,151	2.23%	60
2003	361,138	10,753	2.98%	47

[20] The apparent objective of the above system is to allow corporations with deep pockets to control the outcome of the process, and a related requirement is that matters NOT be decided based on technical merit. This system serves the monopoly objectives of big corporations by giving an edge to their products and technologies over those of their competitors. This obviously violates competition/antitrust law, and it would deprive the consumer from the opportunity to have lower prices and/or better products. The most disturbing aspect, however, is that the above system makes the standards of the IEEE devoid of the expert opinion which people seek and expect when consulting those documents. In case of Standard 998, a document carrying the logo of the IEEE was degraded to the point of being both hazardous and technically invalid.

D) Comments on the ANSI Process

[21] ANSI says that the development of ANSI standards, which is done via its Accredited Standards Developers (“ASD’s”), is governed by the document titled: *ANSI Essential Requirements: Due process requirements for American National Standards*. That document gives the reader the impression that the process is credible and that ASD’s are subject to strict requirements. My appeal to ANSI, on the other hand, revealed that this is not true. This is further discussed hereafter.

[22] One of the biggest problems is that it was ANSI itself that empowered its ASD's not to hold hearings on technical matters. The impact of this rule goes beyond appeals that challenge the technical validity of a draft standard, because an ASD can reject a procedural appeal by saying that it involves a technical issue. The IEEE actually did so in rejecting a crucial appeal regarding standard 998, namely that the document exceeded its authorized scope.

[23] The most important features of the ANSI process are as follows:

- a) The document must be made available for public comments, and the decision regarding acceptability of the document is based on both the comments made by the public and those made by the ballot group of the ASD. This feature overcomes any likely skew arising from improper composition of the ballot group.
- b) The document must be submitted to BSR which determines its acceptability based on both groups of comments that are mentioned above.
- c) Aggrieved persons are permitted to complain to BSR. This feature overcomes any likely bias of the appeal panels of the ASD.

[24] Unlike accredited labs which are not permitted to do work that does not comply with their accredited procedures, ANSI allows its ASD's to publish standards that were not developed in accordance with the ANSI process. The IEEE takes advantage of this, and other ASD's probably also do, by describing itself in those non-compliant documents as being an accredited organization, thus giving the user a false impression regarding the quality of those documents. The IEEE refused when I asked them to delete that misleading information from the non-compliant standards.

[25] The ultimate abuse of the above two-tier system is that the ANSI status of an existing standard can be dropped when revising it if the ASD realizes that the new material being added would not survive the public comment process and the subsequent scrutiny by BSR. That was what the IEEE did in case of Standard 998. Worse still, the IEEE asserted during the ANSI hearing that the ANSI status of Standard 998 will be retained, then broke their promise after the ANSI Executive Council rejected Mousa's complaint, partly in reliance on the above promise.

[26] ANSI's response was rather shocking when the above matter was brought to its attention. They in effect said that an ASD is not bound by promises that it makes during ANSI's hearings!

[27] In case of Standard 998, there was evidence that the impugned design method that was being introduced already caused fatalities and injuries. Mousa also argued that the procedure used by the IEEE cannot be proper if it has led to introducing a design method that is both hazardous and technically invalid. ANSI itself rejected that argument, and refused to take notice of the reported fatalities, on the grounds that it does address technical issues!

[28] Another aspect of the ANSI's procedures is that it allows some ASD's to designate their documents as "ANSI Standards" without submitting them to review by BSR. The risk of abuse

in this case is apparently bigger than the abuse being committed by ASD's who do not have such privilege.

[29] Impartiality of the adjudicators is the cornerstone of validity of any appeal process. In the past, ANSI appointed hearing panels when the ASD and an appellant failed to agree on composition of the hearing panel. ANSI discontinued that role in or about 2003. With each ASD being in effect judge and jury, a fundamental due process requirement has in effect been gutted.

[30] I believe that the shortcomings of the ANSI process arise from the fact that it is a federation of its Accredited Standards Developers, rather than being an independent watch dog. Further, the governing boards of ANSI appear to be dominated by its bigger ASD's and, judging by the case of IEEE-SA, big for-profit corporations have strong influence there. I believe it was those forces that got ANSI to empower its ASD's not to hold hearings on technical matters. Those forces also exonerate an ASD when being complained against by ruling that its conduct is good enough. In this connection, the ANSI Executive Council found it acceptable when I told them that the Working Groups of the IEEE are not required to provide a rationale for their decisions, and are only required to say that this was how the majority voted. (That was how the P998 Working Group decided that the opinion of the consultant of a vendor was better than the collective opinion of all independent scientists!)

E) Documentation

[31] The documents related to the dispute regarding the standards program of the IEEE are already posted on the web site of the Yahoo Lightning Protection forum. The numbers of the related messages are given below. The full web address of each document takes the form:

<http://tech.groups.yahoo.com/group/LightningProtection/message/xxxx>

Where "xxxx" is the Message Number

[32] Message #2612, dated 25/Jul/2013, announcing the launching of court action against the IEEE.

[33] Message #2651, dated 06/Feb/2014, attaching copies of Mousa's Statement of Civil Claim that was dated 23/Jul/2013 and the IEEE's Response to Civil Claim that was dated 14/Aug/2013. This Message gives an overview of the proceeding that led to the BC Supreme Court hearing of 28-29/Jan/2014.

[34] Message #2652, dated 07/Feb/2014, attaching copies of the following: a) Mousa's Application re: Interim Costs; b) IEEE Response re: Interim Costs, and; c) The text of Mousa's Affidavit #6, sworn 08/Jan/2014, titled: "Re: Application for Interim Costs".

[35] The Exhibits of Affidavit #6 form a total 291 pages. To facilitate handling, these were divided in two parts and were posted in Messages nos. 2653 and 2654, both of which were dated 07/Feb/2014.

[36] Message #2655, dated 09/Feb/2014, attaching copies of the following: a) The 16/Sep/2013 application of the IEEE that sought to strike Mousa's Statement of Civil Claim on procedural grounds; b) Mousa's Response dated 26/Sep/2013, and; c) Mousa's Reply Affidavit #7, sworn 22/Jan/2014.

[37] Message #2657, dated 11/Feb/2014, attaching Mousa's Affidavit #5, sworn 08/Jan/2014, titled: "IEEE's Mishandling of the Safety Issue and the Resulting Tarnishing of its Image".

[38] Message #2658, dated 13/Feb/2014, attaching Mousa's Affidavit #1, sworn 25/Sep/2013, titled: "Involvement of the IEEE with British Columbia".

[39] Message #2659, dated 14/Feb/2014, attaching Mousa's Affidavit #3, sworn 25/Sep/2013, titled: "Lack of Credibility of the IEEE".

[40] Message #2660, dated 15/Feb/2014, attaching Mousa's Affidavit #4, sworn 08/Jan/2014. This documents the proceedings of the Appeals regarding IEEE Standard 998 before the hearing panels of both the IEEE and ANSI.

[41] Message #2661, dated 17/Feb/2014, attaching Mousa's Affidavit #2, sworn 25/Sep/2014, titled: "Opposition of the Lightning Experts Against IEEE Standard 990".

[42] Message #2664, dated 19/Feb/2014, attaching copies of the Written Submissions of the IEEE regarding both its Application to strike Mousa's pleadings and Mousa's Application re: Interim Costs.

[43] Message #2665, dated 20/Feb/2014, attaching Mousa's argument re: Interim Costs, his reply to the IEEE's application to strike the pleadings, proposed alternative pleadings, and Mousa's Response on the Jurisdiction issue.

[44] Message #2666, dated 21/Feb/2014, attaching the Reasons for Judgment of Weatherill J. following the hearing of 28-29/Jan/2014.

[45] Message #2673, dated 11/Mar/2014, attaching Mousa's Notice of Appealing the judgment of Weatherill J.

F) Summary and Conclusions

[46] Circular A-119 and Public Law 104-113 have commendable objectives. However, they rest on the presumption that the so-called "voluntary consensus standards" indeed reflect consensus, embody expert opinion or at least have technical merit, serve to protect public safety, and do not conflict with antitrust law. Unfortunately, the evidence presented herein shows otherwise in at least certain specific cases. Further, this evidence raises suspicion that the underlying problems may be wide spread among the so-called "Accredited Standards Developers".

[47] In view of the above, it is recommended that Circular A-119 mention the above findings and strengthen the exemption given to government agencies not to adopt the so-called "voluntary

consensus standards” where they are suspected of violating antitrust law, failing to guard public safety, or are technically mediocre.

[48] It is recommended that any so-called “voluntary consensus standard” not be given preference unless it is designated as an “ANSI Standard” and was actually processed by the ANSI Board of Standards Review (“BSR”), which means that it also underwent the public review process. It would be prudent that the government agency wishing to adopt such a standard also do due diligence by reviewing the related comments that were submitted by the public on that document. Those comments should be available from BSR.

[49] It is recommended that any other so-called “voluntary consensus standard” not be adopted by a government agency until it has scrutinized it itself by doing the following:

- a) Having its content reviewed by a panel of subject matter experts who were not involved in developing that standard, and;
- b) Soliciting public comments on that document by posting notices in suitable publications as experts and other concerned parties are not likely to be readers of the Federal Register.

[50] Finally, it would help if NIST was given a role in investigating complaints from the public regarding the development of standards within USA. The objective of this would not be to oversee the developers of standards, but rather to take notice of the matter and to alert US government agencies that a problem, or a potential problem, exists in connection with a specific standard and its developer.

ALL OF WHICH IS RESPECTFULLY SUBMITTED.

A handwritten signature in black ink, appearing to be 'ehal' followed by a long horizontal flourish.