

*Amateur Radio Station*  
**DJ5IL**

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Registered Letter / Advice of Delivery,  
by E-mail in Advance

8 December 2014

Complaint 1752/2014/JN

Dear Ms O'Reilly,

I reply to your letter of 13 November 2014 [1] concerning my complaint about the citation of EN 50561-1 as a harmonised standard in the OJEU by the European Commission which is illegitimate and therefore a case of maladministration.

You wrote:

*"After a careful examination of your complaint, I have decided to maintain my earlier view that there are not sufficient grounds for opening an inquiry in your case. In fact, the harmonised standard published in the Official Journal refers to "Powerline communication apparatus used in Low-voltage installations" (emphasis added). It seems therefore that the Commission's explanation that the mandate was applicable because the devices in question form part of the network is correct. This does not contradict the wording of the mandate M/313 which states that it applies to telecommunication networks "including their in-house extensions" and not "equipment to be connected to the networks". I would also like to point out that the Ombudsman's capacity to review this type of technical cases is limited to procedural aspects and to manifest errors of appreciation in the institution's assessment. I have not identified a manifest error of appreciation in the Commission's assessment."*

The applicability of mandate M/313 to the standard EN 50561-1 is not deducible from the consistency of the standard's title and the Commission's explanation. Please note that my complaint indeed concerns solely aspects of the standardisation procedure. However, the understanding of a few basic definitions is required for a sound judgement of my complaint:

In 2001 the European Commission issued mandate M/313 [2] concerning the preparation of EMC (Electro-Magnetic Compatibility) standards for telecommunication networks.

By definition a telecommunication network is a collection of *nodes* which are connected by *links* so as to enable telecommunication between the terminal nodes. A *terminal node* is a device which ends a telecommunication link and it is the point where a signal enters and/or leaves the network. Typically each terminal node is a "modem" (modulator/demodulator), a device that modulates signals to encode digital information and demodulates signals to decode the transmitted information. The goal is to produce a signal that can be transmitted easily over the network and decoded to reproduce the original digital data. A link is a communication channel that connects the nodes, it may be an actual physical link or it may be a logical link that uses one or more physical links. In wire-line networks the most popular physical links consist of coaxial (screened) cables, telephone wires or power lines. The technology which utilizes existing power lines is called PLC (Power Line Communication) and the "*Powerline communication apparatus used in low-voltage installations*" which are described in the title of the standard EN 50561-1 are nothing else than PLC-modems.

Products are articles manufactured for sale on the market and standards covering such products are called product standards. The components of a telecommunication network are products in the form of electronic equipment/appliances/apparatus (e.g. modems) and other items (wires/cables), but the network as a whole entity is not a product because it is a custom made installation with an individual topology which is not readily available on the market and standards concerning such networks are called network standards. Modems, for example, are products used in and therefore parts of networks, whereas equipment which utilizes the network for telecommunication are products to be connected to and therefore not parts of networks.

Besides of these definitions it is important to understand the purpose of mandate M/313 which is explained as follows:

*"Since the entry into force of the EMC Directive, a number of harmonised standards have been produced covering the electromagnetic compatibility of electrical and electronic appliances. No harmonised standards, however, have been developed covering the electromagnetic compatibility of fixed installations, such as, for instance, telecommunication networks. While this situation so far may have been satisfactory, such installations increasingly cause interference to radio services, and are in some case experiencing interference (...)"*

Though the technological background behind that explanation is unimportant for the judgement of my complaint, it may deepen your understanding of the topic. It is the fact that standards concerning the EMC of installations - for example networks - are much more important for the protection of radio services and of the installation itself than standards concerning merely the products used in these networks, because EMC problems are often caused by the interaction of the network components though the components themselves - for example PLC-modems - may meet prescribed EMC requirements when tested without being integrated in a real network. And as a consequent result of this insight mandate M/313 defines its scope as follows:

*"Therefore, the European Commission requests CEN, CENELEC and ETSI:*

- to prepare and adopt harmonised standards covering the electromagnetic compatibility requirements (emission and immunity) for telecommunication networks using:*
  - power lines*
  - coaxial cables*
  - telephone wires (e.g. using xDSL technology)"*

It follows that mandate M/313 unmistakably concerns the preparation of EMC standards for telecommunication networks as whole entities (EMC network standards) and not for products used in these networks.

An aeroplane is not just an engine, which is only part of the aeroplane. And if a safety standard expressly for aeroplanes is mandated in order to avoid hazards, it is obvious that the preparation of a standard just for engines is not subject of the mandate. By the same token a telecommunication network is not just a modem, which is only part of the network. And because an EMC standard expressly for telecommunication networks is mandated by M/313 in order to avoid interference to radio services, it is obvious that the preparation of a standard just for products used in these networks is not subject of mandate M/313.

*Home networks* can be combined with external *access networks* which connect subscribers to their service providers. The result is a combined network with the access network being its external part and the home network being its in-house part. Mandate M/313 concerns "*wire-line telecommunication networks including their in-house extensions*" and it makes clear that "*in-house extensions*" in that context stands for the in-house part of such networks and not for equipment to be connected to the networks by stating:

***"This mandate does not concern the preparation of harmonised standards relating to the electromagnetic compatibility of equipment to be connected to the networks."***

However, this statement does not mean that equipment to be connected to the networks are the only products excluded from the scope of M/313. The fact that no products at all (neither those used in networks nor those connected to networks) are subject of M/313 is indisputable because it has been formally confirmed by the Commission itself according to the CENELEC document "STATUS REPORT ON THE FOLLOW-UP OF EC MANDATE M/313 ON EMC OF TELECOM NETWORKS" from June 2002 [3] which states:

### ***"3 Scope of M/313***

#### ***3.1 Networks and not products***

***Following a query from CENELEC, the Commission has formally confirmed that M/313 envisages the preparation of harmonised standards on EMC of networks and not of products (...)"***

It follows that mandate M/313 concerns the preparation of harmonised standards neither for products used in networks nor for products to be connected to networks (product standards) but for networks as whole installations (network standards). Therefore the Commission's explanation that the mandate M/313 was applicable because the devices in question form part of the network is incorrect and indeed represents a manifest error of appreciation in the Commission's assessment.

Actually CENELEC followed mandate M/313 only for networks using telephone wires and coaxial cables by preparing the two-part network standard EN 50529 in 2010 entitled as follows:

***EN 50529-1: "EMC Network Standard - Part 1: Wire-Line telecommunications networks using telephone wires."***

***EN 50529-2: "EMC Network Standard - Part 2: Wire-Line telecommunications networks using coaxial cables."***

But to this day CENELEC did not fulfill mandate M/313 from the year 2001 for networks using power lines. Instead, CENELEC did what it was expressly not supposed to do - namely to prepare the PLC product standard EN 50561-1 entitled "*Power line communication apparatus used in low-voltage installations*".

The product standard EN 50561-1 is undoubtedly not subject of mandate M/313 and therefore it is not eligible for citation in the OJEU. But though it has not been mandated the Commission has harmonised EN 50561-1 by publishing its reference in the OJEU and in doing so has ignored and breached its own regulations.

You still missed the point: only networks as whole installations but no products at all, neither products used in networks nor products to be connected to networks, are subject of mandate M/313. Therefore I uphold my complaint which will be resubmitted within the next days in a further revised 3rd version.

Yours sincerely,



Karl Fischer

[1] [http://cq-cq.eu/OReilly\\_DJ5IL\\_2.pdf](http://cq-cq.eu/OReilly_DJ5IL_2.pdf)

[2] <http://cq-cq.eu/M313.pdf>

[3] [http://cq-cq.eu/M313\\_Status.pdf](http://cq-cq.eu/M313_Status.pdf)