Brussels, 22 March 2019

Orgalim views on the EC Roadmap for a delegated Act on upload of software to radio equipment

Ref. Ares (2019) 476957 [1]

As stressed in the Commission Communication on "digitising European Industry" (COM(2016)180), digitalisation has become one of the major drivers of industry's competitiveness and innovation capacity. This is enabled namely through radio equipment which is increasingly incorporated in technological products such as telecommunication equipment, robotics, automation, laser and sensor technologies, electronics for automotive, household appliances, security and energy markets.

In this context, Orgalim is pleased to provide its views on the particular issue of embedded and business software which may be installed in this equipment and products. Our industry is committed to keeping such products interoperable in the public radio spectrum and safe for all end-users including when further software updates and reconfigurations are applied to the products, under the framework of the Radio Equipment Directive (RED).

In Orgalim's view, a one-size-fits-all approach is neither realistic nor feasible. Should a delegated act be considered necessary at all, then it should respect the principles of proportionality and better regulation: additional administrative burdens need to be carefully examined and should be deemed justified and applicable only to those product categories presenting a risk of non-compliance. The impact of such measures on innovation and the competitiveness of new products and applications should be carefully examined.

Therefore, we deem option '1' (industry self-regulation) as the most appropriate policy option under the current RED.

Orgalim remains at the disposal of the European Commission to provide further details on these initial comments. Furthermore, Orgalim expresses its interest and availability to provide additional explanations and evidence during the next steps of the impact assessment, as well as in the Expert Group on Reconfigurable Radio Systems.

---

[1] Commission Delegated Regulation on the Application of Article 3 (3) (i) and 4 of Directive 2014/53/EU relating to Reconfigurable Radio Systems – Inception impact assessment: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=PI_COM:Ares(2019)476957

Orgalim   +32 2 206 68 83
BluePoint Brussels   secretariat@orgalim.eu
Boulevard A Reyers 80   www.orgalim.eu
B1030 | Brussels | Belgium   VAT BE 0414 341 438

SHAPING A FUTURE THAT'S GOOD

1. UPLOAD OF SOFTWARE TO RADIO EQUIPMENT

The main reasons to update the software in a product are:
- ➢ configure a certain functionality
- ➢ upgrade the functionality
- ➢ upgrade the performance and usability
- ➢ upgrade the security aspects
- ➢ remove bugs

Uploading this type of software or software updates is an unquestionable necessity in the digital world and always has to take into account the function of the product. Furthermore, the legislation requires that the essential requirements of the product under the RED are not affected by the updates.

2. INFLUENCE OF SOFTWARE ON THE ESSENTIAL REQUIREMENTS

When radio equipment is properly designed, it is the intention of the manufacturer to ensure that the upload of software to a product during its use does not impact its ability to meet the essential requirements of the RED. However, three cases have to be considered:

i) Safety according to Article 3.1a) can be determined by the hardware design of the product. For many products, it is unlikely that software will be able to alter the fixed hardware settings and cause safety risks. Therefore for such products, no intervention is required.

ii) Electromagnetic compatibility (EMC), to a great extent can also be determined by the hardware design, according to Article 3.1b). Potential risks may occur if the uploaded software alters radio frequencies for example or the radio output power and these cases would often lead to a potential non-conformity of the use of the spectrum and the occurrence of harmful interferences according to Article 3.2. Therefore, this case has to be examined in more detail.

iii) The potential effect of uploaded software on the other essential requirements according to Article 3.3 cannot be judged today, as there are no details of such essential requirements defined yet. The interaction between these elements have to be examined and addressed when the respective legislative acts are developed. This may result in additional, specialised requirements for the particular essential requirement and the products affected.

As a consequence of the last point, it is obvious that a simple one-size-fits-all approach is not realistic nor is it feasible.

3. SOFTWARE AND RADIO PROPERTIES

To equip a product with certain features in order to ensure that software cannot affect the essential requirements requires a complex product design:

i) The product needs connection to the internet e.g. to get access to a certificate server in order to check the trustworthiness of the software.

ii) The connection to the internet needs to be secure.

iii)   The product needs computational power to check and verify the features of the software in relation to its functionality and its conformity with the essential requirements.

Especially in industrial applications there are products which fulfil a specialised task in a well-defined environment. A typical example is wireless sensors. These usually transmit their sensor data in a short range area using standardised frequencies and protocols such as Bluetooth, WLAN, ZigBee and others. Such sensors have a special design with limited functionality and cannot perform the required verification of software to be uploaded during use. Furthermore, such functions would require high energy consumption which cannot be supplied by small batteries or via energy harvesting from temperature gradients or other sources.

In many products the radio functionality is performed by a radio module with its own hardware-fixed firmware which determines the radio properties and cannot even be accessed by external software.

If there is an option to upload software then it is for the functionality and performance of the product according to its primary function for the end user; such software has no relation to nor does is it intended to modify the radio properties.

Therefore, a careful look at the broad variety of radio products is necessary when defining categories and classes of products in the delegated act.

4. CATEGORIES AND CLASSES OF RADIO EQUIPMENT

As the envisaged delegated legislative act is under the regime of the RED it has to follow the principles of the New Legislative Framework. One of the core principles of the NLF is a risk based approach. Legislative requirements have to be proportional to the risk which they address.

It is key to acknowledge that a one-size-fits-all approach as well as a simple and undifferentiated classification of products will endanger the objectives of the roadmap in the Inception Impact Assessment, namely: innovation and competitiveness, functioning of the Internal Market and the risks of lockdown of (a majority of) radio equipment. A very careful selection of the categories and classes of radio equipment has to be made.

5. CONCLUSION

The delegated act should be limited only to classes of radio equipment for which it is likely that software updates could lead to a serious risk of non-compliance. It is in a manufacturer's own interest to design products delivering the desired functions without causing non-compliance (this is acknowledged by the European Commission in clause C. of the Roadmap for the Inception Impact Assessment). Therefore, the market has a self-regulating element which has to be taken into account. Pursuing cases of non-compliance is the task of market surveillance.

Therefore, we deem option '1' as the most appropriate policy option under the current RED to prevent overlapping and fragmented legislative requirements on cybersecurity for internet-connected radio equipment.

If a delegated act is considered necessary at all, then it needs to respect the principles of proportionality and better regulation. Consequently, it should be drafted in a way that additional administrative burdens are justified and applicable only to those product categories presenting a risk of non-compliance. A one-size-fits-all approach will not be realistic nor is it feasible. Additionally, it has to carefully examine its effects on innovation and new competitive products and applications.

Orgalim
BluePoint Brussels
Boulevard A Reyers 80
B1030 | Brussels | Belgium

+32 2 206 68 83
secretariat@orgalim.eu
www.orgalim.eu
VAT BE 0414 341 438

SHAPING A FUTURE THAT'S GOOD