Euralarm position on the future of the Alarm Equipment operating in the 868.6 - 869.4 MHz Bands

Euralarm would like to take the opportunity to comment on the potential impact on wireless alarm systems of the European Commission´s intention[1] to rearrange and/or share the dedicated frequency bands used for alarms and social alarms in the 863-870 MHz Short Range Device bands[2].

- *Risk of interference between differing devices*

Wireless alarm systems are an effective alternative to traditional wired systems for all applications. They utilise radio communications to interconnect the sensors and devices (intrusion/motion detectors, smoke detectors, call-points, etc.) with the controllers. This concept is both economic and provides many unique benefits, without the need for cable.

In the past, wireless alarms operated in the 433 MHz band. This frequency had spectrum access and responsiveness challenges although it remains in use for some systems. Nowadays, higher performance systems use the 350 KHz allowed around 869 MHz for alarm systems and social alarms, so that good spectrum access, connectivity and responsiveness are obtained.

While Euralarm understands that all Short Range Devices operate on a non-interfering and non-protected basis, this has always been taken to refer to unintentional interference. **If the band used by alarm systems is deliberately opened up to be shared with any other devices that use different spectrum access mechanisms, there will be significant potential for interference between devices, leading to a degradation of performance or even inhibited access to the spectrum.** Moreover, the situation will not only affect new alarm installations, it could also have severe adverse effects on existing installations, which were made in good faith according to the access rules of the current band.

All this could have major consequences as alarm systems fulfill an essential role in safety and protecting premises (e.g. public buildings, schools, hospitals), possessions and, most importantly, people. Therefore, **Euralarm requests that the potential impact on alarm systems be carefully considered and fully taken into account during any update of the spectrum access or usage requirements.**

- *Need to guarantee compliance with existing performance criteria for wireless alarm systems*

Existing European Standards already set out performance criteria for fire alarm, intruder alarm and social alarm systems and devices, namely:

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1 As expressed in the guidance for the fifth update of the EC SRD Decision RSCOM11-28 Rev of 7 July 2011 (http://ec.europa.eu/information_society/policy/ecomm/radio_spectrum/_document_storage/rsc/rsc36_public_docs/rscom11-28_rev_5th_update_srd.pdf)

2 As defined in Commission Decision 2006/771/EC (http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:312:0066:0070:EN:PDF) and the ERC Recommendation 70-03 (2011), (http://www.erodocdb.dk/Docs/doc98/official/pdf/REC7003e.pdf)

- Fire alarm systems are covered by European Standard EN54, part 25 of which covers wireless systems. It includes overall performance criteria for fire detectors, including those signaling by wireless means.

- Intruder alarm systems are covered by EN50131, which again includes performance requirements for detectors and systems, including those signaling by wireless means.

- Social alarm systems [3] are covered by EN300220, ETSI TR103056 and EN50134. The performance criteria form part of the product certification and system acceptance requirements.

In particular, Euralarm member organisations, which are also ETSI members, have contributed information to the ETSI TR 103 056 [4] "Technical characteristics for SRD equipment for social alarm and alarm applications", which Euralarm fully supports. We believe that the information contained in the ETSI TR could be very useful for adequate and effective spectrum sharing studies

It is absolutely essential that any changes in the allocation of the wireless alarm spectrum will continue to allow such systems to perform adequately, as they do today, and meet at least the minimum requirements established in the existing performance standards.

While it is possible to increase performance levels of the signaling while being interfered, this will come at increased product and system costs as well as reducing overall spectrum efficiency. **There is also no guarantee that, even with increased performance of the wireless signaling, the overall performance will be adequate if the band is further shared with other devices.** Moreover, equipment already installed could cease to function or fall well below existing standards due to the interference from equipment sharing the band.

About Euralarm

Euralarm is the association of European manufacturers, installers and service providers for the electronic Fire Safety, Security and Services Industry.

Founded in 1970, Euralarm represents over 2500 companies having a total turnover of approximately 11 billion Euros, which is about 70% of the European market. Our members include national associations in 16 countries as well as individual companies.

For more information please visit www.euralarm.org

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3 Systems and devices used by the handicapped, elderly and sick people in life safety situations. In 2005/928/EC (http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:344:0047:0051:EN:PDF)the European Commission decided to provide an exclusive spectrum at 169MHz, for social alarm applications which are defined as "(..) reliable radio communications system and network including portable equipment which allows a person in distress in a limited area to initiate a call for assistance by a simple manipulation". The social justification remains the same and does not relate to the frequency band used.

4 Electromagnetic compatibility and Radio spectrum Matters (ERM); System Reference Document; Short Range Devices (SRD); Technical characteristics for SRD equipment for social alarm and alarm applications (http://pda.etsi.org/exchangefolder/tr_103056v010101p.pdf). Generally using the most stringent technical parameter for their receiver (category 1).