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ETSI_ERM_TG34

Email:

What do you want Ofcom to keep confidential?:

Keep nothing confidential

If you want part of your response kept confidential, which parts?:

N/A

Ofcom may publish a response summary:

Yes

I confirm that I have read the declaration:

Yes

Ofcom should only publish this response after the consultation has ended:

You may publish my response on receipt

Comments:

This response to the OFCOM consultation document is submitted on behalf of members of ETSI_ERM_TG34.

Firstly ERM_TG34 welcomes the study that has been undertaken by OFCOM on the future

of the band 917 ? 921 MHz and the thoroughness of all of the issues considered in their consultation document. In its conclusion the consultation document states that the two main choices facing OFCOM are either to sell the band to the highest bidder/s or to make it available for use by RFID/SRDs on an unlicensed or light licensed basis.

Members of ERM_TG34 are strongly in favour of the second alternative since it would substantively meet the needs described in the ETSI SRDoc TR 102 649-2. However they recognise that OFCOM require additional input in order to reach a decision.

It is noted that the consultation document makes reference to the use by RFID of LBT. This technique was included within an earlier version of EN 302 208, which will be superseded at the end of 2009. The current version, which was harmonised in April 2008, uses an alternative technique for sharing known as the four-channel plan. This version of the standard made possible the installation of large- scale RFID systems in Europe.

Since then the use of RFID at UHF has expanded to meet a very broad range of applications, which is only really limited by the imagination of the user. Although the rate of expansion has been adversely affected by the financial climate, nevertheless the installed base continues to grow steadily. Brief details of just some of the markets for RFID at UHF are described below.

Currently the principal market for RFID at UHF is materials handling. Uses mainly include the tracking of tagged pallets, cartons and miscellaneous containers. Sales volumes of RFID tags at UHF during 2008 were 865 million. This is significantly more than the total volumes in all preceding years which was 680 million. (Source IDTechEx). Depending on the specific application, benefits include improved traceability and reduced costs

There is growing interest in using RFID tags for item level tagging of clothing. Published studies state that this can increase sales by up to 15% due to better inventory control and reduced out-of-stock items. This application was successfully pioneered in Europe by M&S. It is estimated that during 2009 they will consume 130M tags and their consumption will approach 200M in 2010. (Source IDTechEx) The benefits of item level tagging are fully documented in a study by American Apparel and may be viewed at: http://www.rfid-monthly.com/?page_id=1156. C&A, Gerry Weber and Metro have all announced that they are introducing item level tagging. It is probable that other retail chains will follow.

In October 2009 EPCglobal issued an important press release, which describes the successful development of a system that combines both RFID and EAS functions within a single tag. Not only does this new system provide considerable functional benefits to the retailer, but also it dramatically improves the cost benefit analysis in favour of RFID. The development was undertaken by interested partners of GS1 under the umbrella of EPCglobal. As a consequence of this announcement, the RFID industry anticipates a substantial increase in tag volumes purchased by the retail sector. In addition there will be an increase in the number of interrogators required to meet the need for inventory control, point of sale and EAS protection. The press release can be viewed at: http://www.epcglobalinc.org/about/media_centre/news/Press_Release_GS1_EPCglobal_RFID_based_EAS_Final.pdf

In a quite separate market, the aerospace industry is working towards the integration of RFID at UHF into their business model. Already Airbus is using RFID as part of their assembly

process in Marseille. In the longer term it is planned to use the technology throughout the airline industry. This includes the handling of freight and baggage, where to date a total of 160 million tags have been used on baggage and other conveyances. (Source IDTechEx) In addition RFID will also provide improvements to operating efficiency and simplification of aircraft maintenance. All of these applications will lead to reduced costs. In some cases they will also provide greater passenger convenience and increased levels of safety.

Another emerging market for RFID at UHF is e-health. The principal application areas that are likely to be of interest include the tracking of assets, control of access to secure areas and improved patient care. Although a number of promising trials have taken place, RFID has not yet been deployed in hospitals on a national basis. At this stage it is not possible to provide any quantative market data. However the potential social benefits of using RFID in healthcare are clearly very significant.

The following members of ERM_TG34 have endorsed this response. Bolt-Consult, Bosch, CISC, Checkpoint, Feig, GS1, JSConsult, LPRA, Metro, Motorola, Nedap, NXP, Sensormatic, Siemens AG.

Question 1: Do you believe that the uses listed in this section (Section 3) are possible candidates of the 872/917 MHz bands?:

Although members of ERM_TG34 recognise that it would be possible to auction the band, they have a strong preference to see the band 917 - 921 MHz unlicensed and designated for use by RFID. They also support the proposal to designate the band 872 - 876 MHz for use by SRDs. A full justification for this proposal is contained in ETSI SRDoc TR 102 649-2

Question 2: Are there additional applications/services (not listed above (from Section 3) that could make viable use of the 872/917 MHz bands that Ofcom should be aware of?:

None that TG34 are aware of.

It should be noted that TR 102 649-2 makes extensive reference to automatic metering. The SRDoc proposes that such applications, together with alarms, should operate in the band 874 - 876 MHz

Question 3: What services do you believe should be authorised to use this band? Could you supply relevant information supporting your preference and include any economic data relating to the value of the spectrum in providing these services?:

We are aware that GSM-R have requested an extension of their band to include the frequency ranges 873 - 876 MHz and 918 - 921 MHz. Both ERM-TG34 and the railway community believe that it is possible for RFID to share the upper band with GSM-R. This view is based on some informal feasibility tests that were performed between DB and ERM_TG34 at the BNetzA test lab in Kolberg. (See input document ETSI_ERM_TG34#23_03).

In separate tests involving members of ERM_TG28 and DB, the results also indicated that SRDs could co-exist with GSM-R.

Question 4: Do you agree with the methods used to assess the potential to interfere with adjacent band services in a full licensed approach?:

Not applicable to SRDs or RFID

Question 5: Do you consider that the proposed technical licence conditions would be justified and appropriate?:

Not applicable to SRDs or RFID

Question 6: Do you agree with the methods used to asses the likelihood of services interfering with adjacent band services under the light regulatory approach?:

Presumably SRDs and RFID would operate as secondary applications and shall not cause harmful interference to GSM devices operating in the same or adjacent bands.

The use of separation distances, as proposed in the consultation document, is just one of a number of possible mitigation techniques that could be used to achieve compatibility without the need for a ?light regulatory approach?.

Question 7: We would like stakeholder views on the cost and performance impact of the UMTS900 filters described above.:

The RFID industry would favour any action taken to improve the performance of UMTS receivers. However the RFID industry would resist any attempts to make them contribute towards the cost

Question 8: Are there are any other methods that would give the same protection as the filters? What costs and performance impacts would these have?:

Outside scope ERM-TG34

Question 9: What are your views on the need for and justification of such mitigation measures and how their cost should be borne?:

Outside scope ERM-TG34

Question 10: Stakeholders views are sought on whether the spectrum should be awarded as a single lot by frequency, or whether it should be split in to smaller frequency lots.:

Not applicable to ERM-TG34

Question 11: We would like stakeholder?s views on whether the packaging should be split GB/NI or if we should proceed with UK wide packages.:

From the perspective of ERM_TG34 the package should include the whole of the UK including Northern Ireland

Question 12: Would it be practical for RFID users and adjacent operators (e.g. GSM, UMTS, GSM-R) to co-ordinate locally on a case by case basis? The answers to this will help Ofcom develop its views on whether a database would be required.:

It is certainly the intention of ERM_TG34 to ensure that RFID does not cause unacceptable interference with other users either in the same or adjacent bands. In order to develop suitable mitigation techniques ERM_TG34 have applied to ETSI for an STF to contribute towards the funding of this work

Question 13: Do you agree with Ofcom?s preliminary proposal that the separation distances suggest a light licensing regime if SRD/RFID use in this band were to be supported? If not, how should the interference into adjacent bands be managed?:

The separation distances in the Consultation Document assume that no other mitigation techniques are implemented. The ETSI work item under the STF will investigate DAA and other equivalent techniques to ensure compatibility. Therefore TG34?s preference is a fully unlicensed approach rather than a ?light licensing regime?.Also it should not be overlooked that RFID can be a victim with GSM as the interferer. Based on the feasibility tests it was shown that for the satisfactory operation of RFID systems, interrogators should be sited at least 250 m from base stations.