

# Siemens Traffic Controls

## Response to OFCOM

### Spectrum Framework Review: Implementation Plan

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## Summary

This document outlines Siemens Traffic Controls response to the OFCOM consultation document, titled Spectrum Framework Review: Implementation Plan, issued January 2005.

There is a great amount of detail in this document, which deals with a diverse range of spectrum, most to be made newly available, through a mixture of spectrum trading or spectrum liberalisation. Although Siemens Traffic Control utilizes a range of spectral bandwidths, and its associated technology, this response is limited to those issues which have an immediate bearing on the traffic control market or are otherwise of direct importance to Siemens Traffic Controls.

The main issue of real importance, with respect to Siemens Traffic Controls, is the question over the possible liberalisation in relation to the 1781.7 – 1785 MHz paired with 1876.7 – 1880MHz GSM/DECT guard bands.

This response expands specifically on question 5.7 and 5.8, covering possible awards of co-current UK power licences, within the above mentioned bands.

## **OFCOM Proposal for the DECT/GSM Guard Band**

Siemens Traffic Controls currently uses DECT technology, in conjunction with the full DECT spectrum, as a communications medium for various traffic control equipment. This system has, after some years of development, become a stable product. As a result, Siemens Traffic Controls aims to provide the DECT communications system, within its portfolio of products, for the foreseeable future. The protection of the DECT band, and by implication the DECT guard band, will be of utmost importance to Siemens Traffic Controls.

As OFCOM will be aware, the 2.5GHz ISM band has provided a detailed insight into the most probable outcome of a fully unregulated band.

**Siemens Traffic Controls believes that some form of regulation will be necessary to protect the DECT/GSM guard band from a) spectral creep and b) power creep.**

Point 5.90 of the Spectrum Framework Review: Implementation Plan, indicates a possible term of licence allowing the low power licence to be retrograded to a higher power licence. Although there are current constraints which limit the power above 1878MHz (reference point 5.78), the provision of transference of power capability will inevitably lead to pressure towards incremental increase in transmit power above the 1878MHz frequency.

A national licence will inevitably go hand in hand with the requirement for a high power requirement and visa versa.

**Siemens Traffic Controls believes that full emphasis should be placed on regional, low power licences.**

This policy will allow a larger range of technologies and users/providers to compete for the newly available spectrum; than would be the case if high power licences were to become available.

The larger the number of users/providers the more likely a spectrum will become efficient in its usage. A larger number of initial users will ensure that the spectrum will be utilized on a longer term basis, usually as a dominant provider and/or technology type becomes visible.

A balance between full de-regulation and over regulation appears to be the correct approach. The proposed transition from low to high power option will negate this balance and may, in the medium term, bring about unnecessary pressure in adjacent, in particular towards the DECT spectral bands.

**Siemens Traffic Controls believes that a finite number of regional low power licences will provide the optimum balance between over regulation (stifling spectral efficiency), and under-regulation (uncontrolled coordination of the band).**

**Question 5.7 Is the award of a small number of concurrent UK low power licences (on the basis described) the right approach?**

The OFCOM proposal for the DECT/GSM guard band is described by points 5.89 through to 5.94.

**Siemens Traffic Controls is in broad agreement with the proposal as defined, with the exception of points 5.89 and 5.91.**

Point 5.89 - This point will be covered in Siemens Traffic Controls response to question 5.8 (see below).

Point 5.91 - Ofcom considers that this proposal is likely to offer the most appropriate course of action in light of its statutory duties, in particular its duty to secure optimal use of the radio spectrum. Ofcom considers that it should promote the interests of citizens and consumers by promoting optimal use of the spectrum, while at the same time promoting competition and innovation in mobile communications services. Ofcom has taken particular account of the following considerations in making the proposal:

- the award of a number of concurrent licences for low power use should facilitate the introduction of innovative services of the broad type considered in the NERA study and identified by a number of respondents to the previous consultation;
- at the same time, the limitation in number of these licences to 3 to 6 should ensure coordination between the licensees is manageable, and the licensed (rather than licence-exempt) status of the services should ensure that protection against harmful interference is feasible; and
- the tradability of the licences, coupled with the ability (under certain conditions) to switch to high power use, and the limited number of such licences, provide a mechanism for achieving high power use if in due course low power uses turn out not to be the most efficient use of the spectrum, for example because market circumstances have changed.

The limitation in licence numbers will be covered in Siemens Traffic Controls response to question 5.8 (see below).

As described previously, the possible move from low power to high power licences will inevitably lead to pressure towards an incremental increase in the power limits, of the 1878 to 1880MHz band. This will be to the detriment of the DECT band and all its users/providers.

Therefore in response;

**1) Siemens Traffic Controls believes that some form of regulation will be necessary to protect the DECT/GSM guard band from a) spectral creep and b) power creep.**

**2) Siemens Traffic Controls believes that a finite number of regional low power licences will provide the optimum balance between over regulation (stifling spectral efficiency), and under-regulation (uncontrolled coordination of the band).**

**3) Siemens Traffic Controls believes that full emphasis should be placed on regional, low power licences.**

**Q 5.8 What, in your opinion is the optimum number of low power licences?**

The OFCOM proposal covers the possibility of limiting the number of regional licence holders. This is covered in point 5.91 and more specifically point 5.89.

5.89 - Ofcom proposes to grant a small number of UK low power licences. The precise number is yet to be determined but will probably be within the range of three to six. The licences will be concurrent, i.e. they will have equal access to the entire spectrum on a shared basis: no one licence will have priority over any other. All licensees will be required to co-ordinate with each other to avoid mutual interference. Ofcom will not have a role in this co-ordination process, other than to resolve disputes where there is use outside the terms of the licence conditions.

Siemens Traffic Controls does not believe there is any genuine rationale as to why the number of regional licences needs to be kept to six or less. This does not logically follow when the (low) power limit is 200mW EIRP, and that the band will be self regulated.

With a new spectrum band becoming available, OFCOM's desire to promote an open market, a requirement for spectral efficiency and desire to promote innovation, a wide net as possible should be cast without losing overall control of the self regulating band.

Therefore in response;

**1) Siemens Traffic Controls believes that the number of licences should be increased to a figure in the region of twenty (20) licenses.**