

**Telecom Italia's response to the
Draft RSPG Opinion on Licensed Shared Access**

Executive Summary

Telecom Italia (TI) welcomes the Radio Spectrum Policy Group invitation to express comments and views in relation to the draft RSPG Opinion on Licensed Shared Access (LSA).

TI believes that exclusive licenses have demonstrated the ability to encourage competition through the development of innovative services.

TI strongly believes that frequencies for which *Telcos* have obtained individual rights of use are already very well efficiently used, as operators have to obtain the maximum return on their investments. As a consequence, it was demonstrated that the mobile industry is a clear example of high technical and economic efficient use of spectrum.

Therefore, the implementation of LSA could be of interest only when it is not possible to access spectrum resources identified for IMT in a traditional licensed way. This could be the case only when it has not been possible to refarm and/or clear spectrum resources identified for IMT because they are already used for non commercial purposes and will not be cleared for a long time.

TI believes that the LSA concept should be implemented for a particular range of spectrum resources by means of spectrum sharing contracts in a legally-binding agreement, negotiated between the incumbent, intended as explained below, and additional spectrum users and ratified by the relevant authority; such an approach is already applicable in the present regulatory framework, with no need of a new kind of licence or authorization.

Introduction

TI wishes to explain its view about the concept and the scope of LSA and consequently proposes some modifications to LSA concept and framework definition.

First of all, as already illustrated in details in response to the RSPG public consultation on the “Draft RSPG Opinion on Strategic Challenges facing Europe in addressing the Growing Spectrum Demand for Wireless Broadband” in May 2013, TI’s view is that the LSA concept, if any, should be applied to make available to the telecommunications services spectrum resources that, even if currently identified for IMT services, in a given country are assigned to “incumbents” which are not telecommunication operators (e.g. Ministry of Defence, Public Administrations, Civil Aviation, wireless cameras).

In other words, in TI’s understanding, the application of the LSA concept could increase the amount of overall spectrum resources available to telecommunication operators through solutions of frequency sharing of bands that are designated for IMT services but are not yet exploited for commercial purposes.

Consequently, unlike what seems to be proposed by RSPG, in TI’s view the LSA concept should not be applied to bands for which mobile operators have acquired exclusive spectrum usage rights. Therefore, also for future spectrum assignments, the main approach must remain the “exclusive use”.

As a matter of fact, exclusive access licensing has well known associated benefits such as good interference management and high degree of market certainty that are necessary to create adequate investment and innovation incentives and greater standardization and economies of scale necessary for business development. Indeed, a spectrum policy based on LSA if applied to frequency bands assigned on an exclusive base would reduce investment incentives and economies of scale. Additionally, exclusive licensing has already demonstrated the ability to develop innovative services such as mobile Internet, among others services, while creating positive effects on investment, job creation and social welfare.

Therefore, TI considers that LSA might offer a mere complementary approach to increase the amount of overall spectrum resources available to mobile services. Provided that compatibility

among services/systems are proven feasible, LSA may be applied to share frequency bands that otherwise could not be exploited for commercial purposes in the short term.

Comments to the Draft RSPG Opinion

Background

Concerning the list of frequency bands identified for harmonized IMT in Section II, TI wishes to underline that the 1900-1920 MHz and 2010-2025 MHz bands should be added to the list in brackets.

Concerning the 2300-2400 MHz frequency band, TI is participating and contributing to the studies and activities on the implementation of the LSA concept in that band. As the band itself is identified to implement IMT systems, TI is interested in investigating if the LSA approach can be considered an actual solution to make the band effectively available to the mobile services.

TI considers that the LSA could be an alternative solution to access the 2300-2400 MHz band just and only in Countries where clearing and/or refarming of the spectrum from legacy non-mobile services and users are not achievable in the short term, and therefore where exclusive spectrum allocation to mobile services/systems is not feasible in a timely way.

LSA Scope and Definition

- **The definition of LSA**

TI welcomes the revised RSPG definition of LSA that now does not imply any new licensing regime. However, TI intends to propose some further refinements to the text regarding the LSA definition as highlighted below:

“A regulatory approach aiming to facilitate the introduction of IMT radiocommunication systems operated by a limited number of licensees under an individual licensing regime in a frequency band already assigned or expected to be assigned to one or more incumbent users for non commercial purposes. Under the LSA framework, the additional users are allowed to use the spectrum (or part of the spectrum) in accordance with sharing rules included in their rights of use of spectrum, thereby allowing all the authorized users, including incumbents, to provide a certain QoS”.

- **The definition of incumbent**

TI notes that the proposed incumbent definition is the following:

“an incumbent is a current holder of spectrum rights of use”.

Based on the assumption that incumbents may be distinguished depending on the type of rights of use, TI is of the opinion that only governmental and/or non commercial incumbents should be considered in the LSA definition above, thus excluding ECNs/ECSS providers from the proposed regulatory regime.

Therefore, TI proposes the following alternative definition of “incumbent” in the framework of LSA:

“an incumbent is a ~~current~~ governmental and/or non commercial holder of spectrum rights of use”.

Current Shared Access Practices in EU Member States

Concerning the examples reported in Section IV of the draft Opinion, TI notes that most of them are not real examples of shared access. This is the case of PMR/PAMR bands, as well as the case

for MCA/MCV that are applications of GSM/UMTS in particular environments (ships and aircrafts) and not different services that share the band. This may seem a minor aspect; however the technical and operational implications are considerable.

The different parties in an LSA Framework

Taking into account the definitions of “LSA” and “incumbent” suggested in the previous paragraphs, CEPT and NRA will continue to have an important role in defining technical guidelines for spectrum sharing, provided that different technical conditions can be agreed between incumbent and not incumbent users on a voluntary basis.

TI wishes to point out that LSA is an alternative solution to access new spectrum resources including the situation in which clearing and refarming spectrum exploited for non commercial legacy services and users is not achievable in a given frequency band and the subsequent exclusive allocation of the band to another use (e.g. mobile service) should be not feasible in a timely way.

Legal, Regulatory and licensing aspects

TI considers that the existing regulatory framework at European level, in conjunction with the national ones, already contains the necessary harmonized means to support the implementation of spectrum sharing agreement between authorized operators.

Implications of implementing LSA in EU

TI considers that shared spectrum access potentially increases the cost of the equipment, both for the existing and the new systems, compared to the ones deployed in an exclusive spectrum allocation scenario, because it introduces new co-existence requirements and constraints. This could require tighter emission masks or better strong signal handling for receivers. The cost of implementing these requirements has to be included in any cost/benefit analysis, as at the end it affects the cost for devices and services for the users.

Moreover, there's a relevant gap between the potential impact that the individuation of new exclusive bands for IMT and the implementation of shared spectrum solutions may have on broadband diffusion European plans. The mobile industry and the wireless broadband service penetration may be severely affected in the near future if excessive expectations will be set on the potentiality of the shared spectrum access , limiting the effort of investigating on new bands to be allocated on an exclusive right of use basis.

The opinion of the RSPG

On the basis of the above, TI endorses the RSPG opinion provided that:

- exclusive access remain the primary spectrum access solution for public cellular mobile services, with shared access considered only as a possible complementary mean;
- voluntary shared spectrum access agreements should be supported and safeguarded by a light regulatory framework which gives confidence to the incumbent user and avoids negative impacts on investment incentives resulting from spectrum sharing.

As shared spectrum access increase the need to manage interferences, clear policy indications to protect primary user rights should be defined.