

S-38.042 Seminar on Networking Business

Paper: Scarcity of Licensed Spectrum for Mobile / Timo Ali-Vehmas
Opponent: Comments on paper to be presented 17.11.2004 / Markku Kilpinen

Relevance

As stated in the paper scarcity of licensed spectrum for mobile is an important issue for a nation like Finland, which is very much dependent on the success of its telecommunications sector. Although for political reasons “spectrum fragmentation” may not always be avoided, spectrum management and regulation remains a national tool, which should be used to enforce service quality, enhance competition on the market, and thus maximize social welfare. As 3G gains momentum and evolves towards 3.5G also extension bands for IMT-2000 are required. And before new technologies such as radio technologies or ad-hoc or mesh networks emerge alongside the existing technologies, national policies on spectrum should be carefully reviewed. The author has covered broadly many of the relevant issues giving valuable insight to the reader.

Form

The broad experience of the author contributes to the overall structure of the paper. The text is easy to follow, although the author sometimes fails to go into details or to provide arguments for his statements. This seems to be due to the fact, that the author covers a large number of issues, which is perhaps better considering from the educational point of view.

Substance

The author presents a comprehensive review of the essential spectrum scarcity issues and developments in the telecommunications industry. The perspective seems to be more that of a “large corporation”, instead of a “regulatory authority” or “small operator”. The approach is “realistic” and in this paper the author doesn’t pursue new ideas or comment on more “radical” theories. In overall, the paper is good, explaining for example implementation constraints of cellular networks such as the relationships of capacity and cost.

Since majority of spectrum is held by large operators, I would have been concerned to hear some opinions on what could be done in preparation for 4G to make spectrum available for smaller innovative players without compromising service quality or unduly fragmenting the spectrum. The general topic is complex indeed, but the author could have at least commented on theories for example “Noams Model on Spectrum Commons” and their partial applicability on national level for instance. In my opinion the author could have concentrated more on the “Future of Spectrum Regulation”, because also due to his experience in the industry it was within the scope of his abilities.

