

Rights or Privileges in Frequency Spectrum

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I. The Early Years of Frequency Usage

1. Early Continental European Approach

In the second half of the 19th century almost all European countries declared telegraphy, including the technical appliances and the telegraphy services as such, as a national monopoly: Austria was first in 1847, Belgium followed in 1850, France in 1851, the Netherlands in 1852, the United Kingdom in 1868 and Germany in 1892.

While only postal services had been monopolized in most countries, but not the actual means how to transport the mail, the government saw a need to protect the technical appliances of telegraphy as well against third party intrusion. A technical monopoly was an ongoing invitation for most countries to expand rapidly the scope of the monopoly: in the 1890ies the monopoly was expanded into telephony services and around 1900 into radio transmission and after World War One into broadcasting.

Besides the national incumbent, the governments granted at least one concession for special radio services including the usage of frequencies to private operators: Marconi received a concession for high sea and oversea radio

transmission from the United Kingdom and some other countries, and Telefunken received a concession from Germany for oversea radio transmission.

The usage of frequency spectrum was basically an appendix to the governmental concession, which was limited in time and scope, could be extended and limited within the broad discretion of the government. The concession was not transferable, the governments even controlled any change in the shareholdings of the concession holder. The holder of a concession had a privilege in the frequency spectrum in use, but nothing like a property right.

2. Early United States Approach

From the first Radio Act of 1912 until the second Radio Act of 1927, the United States just reserved certain frequency bands for military or maritime usage, the rest of the frequency spectrum was left free to the first occupant. The Department of Commerce granted licenses to every applicant except in cases of interferences. A court decision held that the Department of Commerce had no discretion to withhold a frequency in case of an application and other courts used the traditional torts law to solve problems between users of adjacent frequency bands as they did with conflicts between

neighboring real estate owners. All this ended with the enactment of the Radio Act of 1927 and the establishment of a regulatory agency in order to administer spectrum allocation according to the public convenience, interest and necessity. As a result, the Federal Communications Commission administered the allocation of the frequency spectrum before applicants could file for a license to use the frequency. Each applicant had to submit studies why the public interest would benefit from his usage of the allocated spectrum. Such license was not transferable and the FCC did control the usage of the frequency, the technical means to exploit the frequency as well as the transfer of shares of a license holder. The license holder had a privilege, but not a property right in the assigned frequency band.

I. **The Evolution in the Last 10 Years**

1. Auction Proceedings

More and more countries started to use auctions in the 1980ies in order to assign frequency bands to applicants. Due to the high prices paid by some applicants, such applicants or its creditors asked for more rights in the frequencies than a concession could provide. Some of the applicants basically had no further assets than the frequency bands and their creditors asked for a security interest in the most valuable asset, the frequencies.

2. The US Experience

When some of the licensees in the United States went bankrupt, the Federal Communication Commission denied the

right of the creditors to take control of the frequencies as the most valuable asset. Under the pressure of the economic reality, the Federal Communication Commission allowed personal communication system PCS licensees to disaggregated spectrum by geography and frequency and allowed general wireless communication system GWCS license holders to offer whatever services make business sense.

3. The German Experience

Similar to the United States, frequencies are only transferable in Germany with the prior approval of the regulatory authority, while changes in the shareholdings of a license holder require notification only. Regarding universal mobile telecommunications system UMTS-Frequencies, the German regulatory authority stopped controlling the technology used by the license holders in order to exploit the frequency spectrum. Since a UMTS-frequencyholder in Germany paid a significant amount during the UMTS-auction for the usage of the frequencies, he receives protection for the first time in Germany under the property rights clause of the German constitution, which was not applicable for license holders who received their frequencies during a traditional beauty contest without paying a significant consideration.

4. Evolutionary Result

In countries where we have seen auctions of frequency bands, licensees are confronted with a hybrid legal framework with vague property rights in the frequency spectrum and continuing

command-and-control administrative regimes.

III. Countries with Property Rights in Frequencies

1. New Zealand

New Zealand has been the first country who developed a property right approach to frequency allocation in the late 1980ies when they introduced tradable rights in frequency bands. Basically, the government assigned certain frequency bands to a spectrum manager, who was free to sell or rent the frequency bands, or portions thereof, to interested parties. So far, only a small percentage of the available frequency spectrum has been transferred to spectrum managers. Most of the spectrum is still allocated under a traditional administrative process.

2. Guatemala

Guatemala developed in the mid-1990ies a more ambitious approach to property rights in frequencies when the legislator decided that all new spectrum allocations should be made through a property rights system. Successful bidders in the new frequency allocation process receive a transferable and fragmentable frequency usage title, a usufruct right. In the first two years after the enactment of the new law, the government conducted thirty-eight spectrum auctions and transferred the requested usufruct rights.

IV. Conclusion

Governmental interests in high revenues during frequency auctions opened the door to property rights in frequencies. As a consideration for high auction prices, applicants and their investors request more than an entirely-governmental controlled concession. Infrastructure projects, operated by private companies and international non-governmental consortia, like LEO, need an affordable project financing. Regulatory hurdles and discretionary concessions are one of the greatest enemies of such projects. Property rights in frequencies would greatly facilitate such infrastructure projects. Due to the intangible nature of frequencies, a transferable usufruct right might be the right legal approach to property rights in frequencies. The existing regulatory authorities have to create a new form of a frequency registry, which allows interested third parties to gather information about a specific frequency and its user.