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Legal issues associated with private human flight, including space and ground facilities, traffic management and spaceports (4)

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OUTER SPACE AND WHITE SPACE: PROMOTING THE EFFICIENT USE OF THESE RESOURCES

Abstract

This paper will explore the benefits of utilizing TV white spaces (TVWS), and the development of new, low-cost technologies and services that can be used to maximize their use, both in outer space and on Earth.

“White space” refers to certain radio frequencies previously used by TV broadcasters that are now available due to the change-over from analog to digital transmissions. Their use may be licensed or unlicensed, depending on the frequency bands used, and the national regulatory entities in charge of assigning spectrum use. They may be used for a variety of services, ranging from inexpensive broadband services, to location-based services, and monitoring the movement of goods and people.

Several major corporations, such as Microsoft and Google, have already run pilot programs and reached agreements with the a few governments in Africa and Asia to use “white spaces” for broadband communications in rural areas, while the International Telecommunication Union (ITU) has undertaken studies on how best to utilize these frequencies.

Several issues arise regarding the use of white spaces: whether the radio frequency spectrum (RFS) previously used for television broadcasting should be licensed, subject to “soft” licensing, or unlicensed. Should white spaces be “reserved” for the provision of broadband communications in under-served areas, thus helping to bridge the digital divide? Could satellite communications and other space-related activities, such as launches, space traffic management, among others, benefit from the use of these radio frequency bands?

Another important question relates to privacy rights, as “white space” frequencies are used for location-based services, and thus may be used to collect information on persons using or merely having wireless communication systems in their possession. While these data may help the marketers, conflicts could arise regarding the extent and control of data that could be easily available.

This paper will explore some of the legal issues that are likely to arise with the use of white spaces, and their implications for emerging space activities. Ultimately, should and could white space be used for the benefit of mankind?