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Reviewed by **James Schwoch**, Northwestern University

Hugh Slotten has a proven track record of producing important and rigorous work about the history of American telecommunications and broadcasting.¹ This article in *Diplomatic History* provides an example of Slotten working on a global level, particularly in his assessment of the interplay between the International Telecommunication Union (ITU) and the growth of American efforts in global communication satellite networks (sometimes called satellite constellations) such as COMSAT and INTELSAT. These issues were important at the time and remain important today, not so much because outer space orbits and so forth are highly regulated (they are not), but because radio frequencies in varying bandwidths are indispensable for the launch, navigation, transmission, and dissemination of satellite signals and information. The ITU dates back to 1866, was first formed as an international telegraph policy and regulatory forum, and was absorbed into the United Nations in 1946. This was long after the ITU had also subsumed wireless electronic communications (communication via wavelengths and frequencies in the electromagnetic spectrum) within its ambit. The ITU is where the world agrees (or, more accurately, where the world tries to agree) on spectrum policy and frequency allocation, most especially spectrum policy and frequency allocation for new technologies of electronic communications. Without some sort of global consensus on which frequencies should be used for which services, frequency interference would run rampant, thus greatly diminishing the usability of the electromagnetic spectrum for wireless communications. The electromagnetic spectrum itself is among the most unusual of natural resources. Like the oceans and seas, and like outer space, the spectrum is open

¹ Books by Slotten on media history include *Radio's Hidden Voice: The Origins of Public Broadcasting in the United States*, (Urbana: University of Illinois Press, 2009) and *Radio and Television Regulation: Broadcast Technology in the United States, 1920-1960*, (Baltimore: Johns Hopkins University Press, 2000.)

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to all potential users. However, unlike the pollution and despoilment of the open seas, or unlike the growing hazard of space debris in Earth orbit, the only 'hazard' to the electromagnetic spectrum is inefficient or impermissible uses of frequencies (such as the so-called jamming' of propagandistic short-wave radio program services during various twentieth century conflicts.) Efficiency is to the spectrum as clean waters are to the ocean.

Other than as viewable objects in Earth orbit for budding astronomers, communication satellites would be useless without radio frequencies, without spectrum bandwidth, without dedicated frequencies. Dedicated satellite frequencies would be indispensable to the global growth and diffusion of outer space communications. However, in comparison to older electronic wireless communication technologies such as radio broadcasting or terrestrial (over-the-air) television, Cold War communication satellites during the period of examination by Sloten had only two potential users for the foreseeable future: the United States, and the Union of Soviet Socialist Republics. Yet by 1957, 94 nations were ITU members: how to persuade the 'users of tomorrow' to accommodate the satellite communications needs of 'the pioneers of today?'

Sloten does an admirable job of taking up this question. In so doing, he opens with a good overview of the ITU and also lays out three central concerns for American space policy: national security concerns, strengthening already-extant ITU alliances with Western Europe, and persuading the ITU to adopt American proposals in the context of the American-Soviet relations. Of prime importance is the author's discussion of the roles of both the Federal Communications Commission (FCC) and the Interdepartmental Radio Advisory Committee (IRAC) in shaping American Cold War policy regarding satellite communications. Sloten is correct to diminish the importance of the FCC and instead direct attention on the much less known, but much more influential, IRAC contributions to American telecommunication policy during the Cold War. The detail Sloten sheds on the workings of IRAC is exemplary and introduces IRAC to a wider range of readers and researchers.

The need for ITU frequency assignments for satellite communications was, as one might expect, first demonstrated by Sputnik; Sloten points out that Sputnik communicated with Earth on a radio frequency that was not reserved for satellites, but on a frequency reserved for other spectrum uses, and that this was not necessarily a problem as long as Sputnik and the other users of that frequency did not interfere with each other's use of that frequency (323). From a Soviet perspective, Sputnik and future satellites did not necessarily present as significant a frequency sharing and bandwidth problem as was the case for the United States. While this might sound strange, Sloten points out that the very large landmass of the Soviet Union, combined with a northern latitude, effectively meant that Soviet ground stations (satellite dishes) literally based on Soviet soil could maintain effective communication with satellites for most to all of a satellite's given orbit (depending on orbit path) whereas the smaller landmass of the United States, combined with a more southerly latitude, meant that the United States would be dependent on ground stations selectively placed in nations around the world to be able to maintain full-orbit communication with

satellites. Thus, ITU agreement on satellite frequencies had implications for future ground stations in nations that might become part of some sort of American satellite communication network. Simply put—as Slotten shows, when it came to ITU cooperation and support regarding frequency assignments and global satellite communication, there was more at stake for the United States than for the Soviets, because the Soviet landmass meant that the Soviets could, so to speak, be more self-sufficient in satellite communication and did not need to heavily depend on other nations agreeing to a specific set, or bandwidth, of satellite-dedicated frequencies. Adding to the brio was a steady undertone of French, and Western European, intimations that France and Europe would be better off with their own regional satellite systems than in cooperating with the Americans; Slotten does a great job of narrating the unfolding drama, and backs the story up with extensive archival research.

Slotten concludes (369-370) by arguing that the ITU Space Radio Communications discussions and policy formations of the 1957-1963 period indicate a ‘new era’ for the ITU, in that the ITU would no longer be largely shaped by an East-West dialogue, but would from that point on be increasingly shaped by a North-South dialogue. I agree with Slotten that the ITU represents one of the earliest—and I would add, one of the most interesting—places to observe the global transition from East-West to North-South dialogic tensions and resolutions. The ITU remains a somewhat under-studied organization in Cold War history, and Hugh Slotten has done a wonderful job of providing a greater depth of understanding on the ITU, the space race, and the Cold War.

James Schwoch is a Professor at Northwestern University, with an appointment in the School of Communication. His interests include global media and media history. His most recent book, co-edited with Lisa Parks, is *Down To Earth: Satellite Technologies, Industries, and Cultures* (Rutgers, 2012).

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