

WAC Informal Working Group (IWG)-2

Draft Modifications to

NTIA’s Preliminary View on Agenda Item 1.19 (see WAC/005(13.01.09))

UNITED STATES OF AMERICA

DRAFT PRELIMINARY VIEWS ON WRC-11

AGENDA ITEM 1.19: to consider regulatory measures and their relevance, in order to enable the introduction of software-defined radio and cognitive radio systems, based on the results of ITU-R studies, in accordance with Resolution 956 (WRC-07)

ISSUE: Resolution 956 (WRC-07) calls for studies into the potential need for regulatory measures related to the application of software-defined radio (SDR) technologies and/or cognitive radio systems (CRS), and specifies that the results of these studies should be considered at WRC-11.

BACKGROUND:

Agenda item 1.19 originated from various proposals at WRC-07. One proposal focused on cognitive radio and the possibility of a worldwide allocation for a “cognition supporting pilot channel (CPC)” – essentially, a pilot channel which would provide radio systems with cognitive capabilities with information regarding locally-available radio spectrum. Another proposal suggested more general studies regarding both cognitive radio and software-defined radio technologies. Resolution 956 notes that without additional means, it may not be possible for a radio system to discover receive-only usage. Resolution 956 (WRC-07) also notes that some studies indicate the usefulness of having means to assist in the determination of the local spectrum usage, such as wireless or wired access to a database or to other networks. Working Party 1B is the lead ITU-R group on this agenda item and is developing a common understanding of SDR and CRS that is appropriate for all radiocommunication services. Previous ITU-R work on SDR was done in ITU-R Working Parties 5A and 5D (or their predecessors Working Parties 8A and 8F) and resulted in the adoption of Report M.2117 (“Software defined radio in the land mobile, amateur and amateur satellite services”). In addition, in this study cycle, Working Party 5A is developing a new Report entitled “Cognitive radio systems in the land mobile service“. The stated scope of this Report, which is currently at the Working Document stage, is to address “the definition, description and application of cognitive radio systems in the land mobile service.” The work within WP 5A has focused on SDR/CRS for Land Mobile Services. Other ITU-R Working Parties (including Working Parties 4C, 4A, 7C, and 7D) are pursuing studies of their own on the implications of SDR and CRS use within and/or on the services for which those groups are responsible, and on whether it is appropriate for technologies or techniques that dynamically search for spectrum to be used in particular frequency bands that are used by receive-only, passive, and/or safety services. In some of these bands, services are fully operational at all times in all locations on Earth and use low-power signals that will be difficult for any device that is designed to determine spectrum

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usage before operating to detect. In other bands, terminals are capable of operating at any location at any time, making detection both difficult and uncertain.

U.S. VIEW: Relevant ITU-R working parties are conducting technical studies, as noted in Resolution 956 (WRC-07). The United States will participate as appropriate in these studies. The United States does not believe that changes to the Radio Regulations are needed to address these technologies. In particular, the United States does not support regulatory measures leading to allocations, including identification footnotes, for software-defined radio and cognitive radio systems, as these are technologies, each with its own attributes, and not radiocommunication services. With respect to the definitions, description, or characterization of SDR or CRS, there is no need to include a definition of SDR or CRS in the Radio Regulations.

As these technologies may also be implemented in license exempt devices, which operate on a non-interference, no protection from interference basis after being authorized by an administration, it may be important to follow studies on WRC-11 agenda item 1.22 on short-range device SRD systems.

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