

**Before the
UNITED STATES DEPARTMENT OF COMMERCE
NATIONAL TELECOMMUNICATIONS & INFORMATION ADMINISTRATION
Washington, DC**

In the Matter of)	
)	
Common Format for Federal Entity)	
Transition Plans)	Docket No. 130809701-3701-01
)	
Notice Of Inquiry)	
)	

COMMENTS OF COMSEARCH

Comsearch hereby respectfully submits the following comments in the above-captioned Notice Of Inquiry (NOI).

I. COMSEARCH BACKGROUND

Comsearch is a leading provider of spectrum management and wireless engineering products and services to the commercial and federal market. Since 1977, Comsearch has been actively engaged with Commission, the National Telecommunications Information Administration (NTIA), and various industry groups and standards organizations to develop rules, industry recommendations, and standards that promote the efficient use of the radio spectrum. Comsearch has extensive experience working with mobile, fixed point-to-point, point-to-multipoint, and satellite systems. Our solutions focus on key areas of spectrum management including frequency planning and administration, spectrum monitoring and interference measurements, wireless engineering, and strategic consultation. Our engineers, software products and information databases address the specific challenges of network design and spectrum management for the wireless industry in both the commercial and government sectors.

We developed methods in the Advanced Wireless Service (AWS) to support transitional sharing between AWS licensees and both commercial and federal incumbents in the 1.7 and 2.1 GHz bands. We collaborated extensively with NTIA and numerous Federal agencies to promote the exchange of data and perform Transitional Sharing analyses.

Through our Comsearch Government Solutions (CGS) division, we provide innovative engineering products and services to the DoD and other federal government. We also have extensive experience working with the federal spectrum management databases and systems.

Comsearch has participated heavily in the recent Commerce Spectrum Management Advisory Committee (CSMAC) work. In this capacity, we contributed to the efforts of Working Group 3, Satellite Control and Electronic Warfare (WG3); Working Group 4, Tactical Radio and Fixed Microwave (WG4); and Working Group 5, Airborne Operations (WG5).¹

II. INTRODUCTION

Comsearch supports NITA's efforts to gather comments on Transition Plan formats and related information. These data will be key in helping spectrum bidders assess the potent mutual impact of sharing spectrum with Federal incumbents. In addition, auction winners will need to engage Federal users regularly as they deploy their systems and perform Transitional Sharing analyses.

III. COMMENTS

1. NTIA should make data available sufficient to perform independent interference analyses with Federal systems.

It is important that Industry be able to perform independent sharing analyses with Federal incumbent systems both before and after an auction. The ability to determine the impact of

¹ We note that WG4 was also tasked with analyzing Joint Tactical Radio Systems (JTRS).

spectrum encumbrances before an auction will help to inform bidding strategies. In addition, post-auction analyses will be critical as licensees seek to perform Transitional Sharing analyses with non-relocating or slow relocating Federal incumbents.²

Reviewing the data elements described in Annex O, we note that several key data elements are missing that would allow commercial interests to perform independent sharing analyses. Accordingly, we suggest that the NTIA include the following data elements in Transition Plan templates:

- Antenna centerline
- Antenna gain or size
- Antenna manufacturer & Model or Type
- Antenna 3dB beamwidth
- Emission designator or channel bandwidth & modulation
- Equipment manufacturer and model
- Transmit power
- Receiver threshold
- Number of channels or data rate
- Line loss
- Radius of operation (mobiles only)

Our experience indicates that these are the basic data elements necessary for performing sharing analyses and determining Protection Zones. The extent to which this data are made available will facilitate Transitional Sharing.

2. NTIA should make available complete information on Protection Zones to promote sharing between commercial and Federal systems that cannot relocate before commercial licensees wish to deploy their systems.

Protection Zones should be established for all Federal systems that are not relocating or that cannot relocate before commercial deployment commences. We recommend that complete information on all Protection Zones be released in Transition Plans and extensively described.

This information should include (but not necessarily be limited to): controlling entity (i.e.,

² Slow relocating Federal incumbents would be those whose relocation time frames overlap licensees' needs to deploy in a given market.

military base or location), center point and radius for circular Zones, or GIS shape file (or .kml file) for irregularly shaped polygon zones.

However, before publishing Protection Zone information, it is important to study Protection Zone analysis methodologies with a goal of improving the assumptions and refining the approach used in the Commerce Spectrum Management Advisory Committee (CSMAC) reports. Indeed, both CSMAC WG4 and WG5 indicated that further study is needed to refine the analyses with a goal of improving the assumptions and approach used in the analysis.³ Both WGs identified several analysis parameters that should be studied including improved propagation models, the use of clutter, antenna discrimination, operational time frames and interference protection criteria.⁴ Comsearch strongly suggests that these parameters and methodologies should be studied as recommended by the WGs, that consensus be reached on an appropriate approach to apply to all Protection Zone analyses, and that all Zones be re-analyzed with any changed parameters or methodologies.⁵

3. NTIA should work with Federal agencies to ensure the data released are accurate, current and frequently updated.

During the AWS-1 efforts, Comsearch worked closely with NTIA staff to analyze and verify the accuracy of the data released pursuant to the CSEA.⁶ The initial releases of the data contained numerous errors and inconsistencies. We helped to identify these inaccuracies thereby

³ See, *Commerce Spectrum Management Advisory Committee (CSMAC), Working Group 4: 1755-1850 MHz Point-to-Point Microwave, Tactical Radio Relay (TRR), Joint Tactical Radio System / Software Defined Radio (JTRS/SDR), Final Report*”, Filed July 23, 2013, Approved by CSMAC August 28, 2013 (<http://www.ntia.doc.gov/other-publication/2013/working-group-4-final-report-1755-1850-mhz-point-point-microwave>) AND “*Commerce Spectrum Management Advisory Committee (CSMAC), Working Group 5, 1755-1850 MHz Airborne Operations (Air Combat Training System, Small Unmanned Aircraft Systems, Precision-Guided Munitions, Aeronautical Mobile Telemetry), Final Report*” Filed July 23, 2013, Approved by CSMAC August 28, 2013 (<http://www.ntia.doc.gov/other-publication/2013/working-group-5-final-report-1755-1850-mhz-airborne-operations>).

⁴ WG4 report at §§4.2.3, 4.2.4 and 4.2.6 plus WG5 report at §1.3.

⁵ We note that this is likely not necessary for microwave point-to-point systems, and we suggest the Commission refer to the National Spectrum Management Association, Recommendation WG 3.90.026, “Coordination Contours for Terrestrial Microwave Systems”, www.nisma.org.

⁶ CSEA, § 202, 118 Stat. 3992–93, 47 U.S.C. § 923 (g) (4) (A), (C).

allowing NTIA to follow up with the controlling Federal agencies to provide corrections. Subsequent data releases contained fewer inaccuracies and inconsistencies as a result of these efforts.

We urge NTIA to work with all controlling Federal agencies to ensure the data being released is accurate, current and frequently updated. We believe the update time frames can vary according to the dynamic nature of the underlying systems. Nonetheless, we suggest that data updates should occur no less frequently than monthly.

4. Comsearch concurs with NTIA that Transition Plan data should be released in a machine-readable format.

For AWS-1, NTIA released data in a .pdf format that made the data difficult to manipulate. We spent significant time converting the data into Excel and other formats. This caused unnecessary delays and errors in the data analysis.

We strongly believe that interested stakeholders must have the ability to easily input Transition Plan data into spreadsheets or planning tools. Releasing this data in machine-readable format facilitate these efforts and greatly improve the time and efficiency of Transition Plan analyses.

5. A “Trusted Agent” may help to safeguard sensitive or classified data.

A Trusted Agent can facilitate the exchange of information for sensitive or classified data. The role of the Trusted Agent would be to help with or perform spectrum identification, spectrum engineering and sharing analyses of Federal systems to enable sharing analyses and discussions while protecting sensitive government and commercial information. The NTIA could release this data to the Trusted Agent who can:

- Act as an impartial data clearinghouse,
- Provide a forum for industry and government stakeholders to address sharing issues

- Perform analyses based on agreed-upon methodology, and
- Protect both government data (including classified) and commercial proprietary information.

IV. SUMMARY

Transition Plans are critical for Industry to fully understand the encumbrances of spectrum they plan to bid on. In addition, Transition Plans are necessary to help fully characterize the Transitional Sharing scenarios as commercial licensees deploy into this shared spectrum. We urge NTIA to consider the recommendations and comments herein in order to improve the process for all stakeholders.

Respectfully Submitted,

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