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April 10, 2009

Ex Parte via Electronic Filing

Julius P. Knapp
Chief
Office of Engineering and Technology
Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

Re: Authorized Ex Parte Contact – Unlicensed Operation in the TV Broadcast Bands (ET Docket No. 04-186)

Dear Julie:

This letter is being submitted in the above-cited proceeding, on behalf of various entities operating as the White Spaces Database Group (Group). Current members of the Group include Consumer Electronics Association (CEA), Comsearch, Dell, Fox, Google Inc., Microsoft Corporation, Motorola, Association for Maximum Service Television, Inc. (MSTV), NetLogix, NeuStar, PCIA, Philips, Public Interest Spectrum Coalition (PISC), Spectrum Bridge, SWIM, and Waterford Consultants, LLC.

The White Spaces Database Group's chief objective is to foster the near-term adoption and implementation of a geolocation database that will successfully support the safe and secure operation of white spaces devices (WSDs) within the parameters of the FCC's November 2008 order.¹ Per that order, we understand that the Office of Engineering and Technology (OET) is finalizing a Public Notice (PN) concerning various elements necessary for establishing the white spaces database. To expedite the agency's consideration of the appropriate models for deploying such a database, the Group is pleased to submit for the record two separate documents: (1) a set of diagrams setting forth a preliminary functional architecture for the database, and (2) a document outlining the terms and concepts used in describing the database architecture.² Both documents are attached.

¹ Federal Communications Commission, Unlicensed Operation in the TV Broadcast Bands, Second Report and Order and Memorandum Opinion and Order, ET Docket No. 04-186, ET Docket No. 02-380, 23 FCC Rcd. 16807 (2008).

² MSTV and Fox believe that the proposed architecture outlined in the attached diagrams does not reflect their views of creating a single database repository and administrator.


Further, in order to ensure that the Commission has developed a useful record in the proceeding, the Group proposes that the PN address the following salient topics related specifically to the functional components shown in the database diagrams:

- the relative merits of separating the database functions between a Data Repository and multiple Service Providers;
- the qualifications and mechanism for an entity to become a Service Provider;
- the qualifications and mechanism for an entity, including a non-profit association representing industry stakeholders, to become a Repository Administrator;
- the relative merits of having multiple Service Providers per Data Repository;
- the relative merits of having multiple Repository Administrators; and
- whether a Repository Administrator should be authorized, or even required, also to operate as a Service Provider.

We look forward to working with you and your staff on these and other important elements of the geolocation database.

Please let us know if you have any questions.

Respectfully submitted,

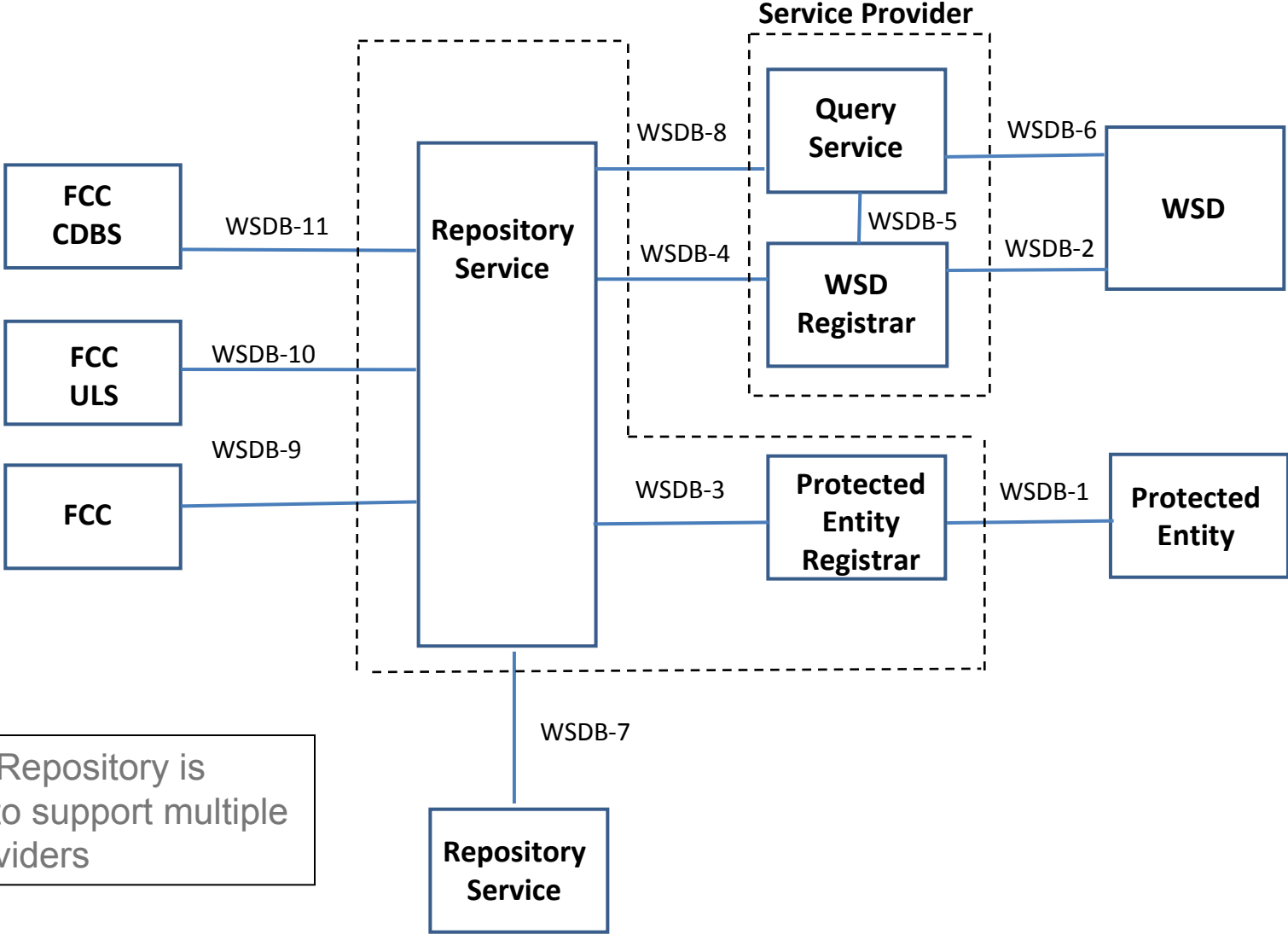


Richard S. Whitt, Esq.
Washington Telecom and Media Counsel
Google Inc.

cc: Marlene Dortch, Secretary, FCC

Attachments: White Space Database Reference Architecture (slides)
White Spaces Database Architecture Definitions

Figure 1. WSDB Reference Architecture



Note: Each Repository is anticipated to support multiple Service Providers

Appendix

Figure 2. WS Reference Architecture with Combined WSD Registrar and Query Service

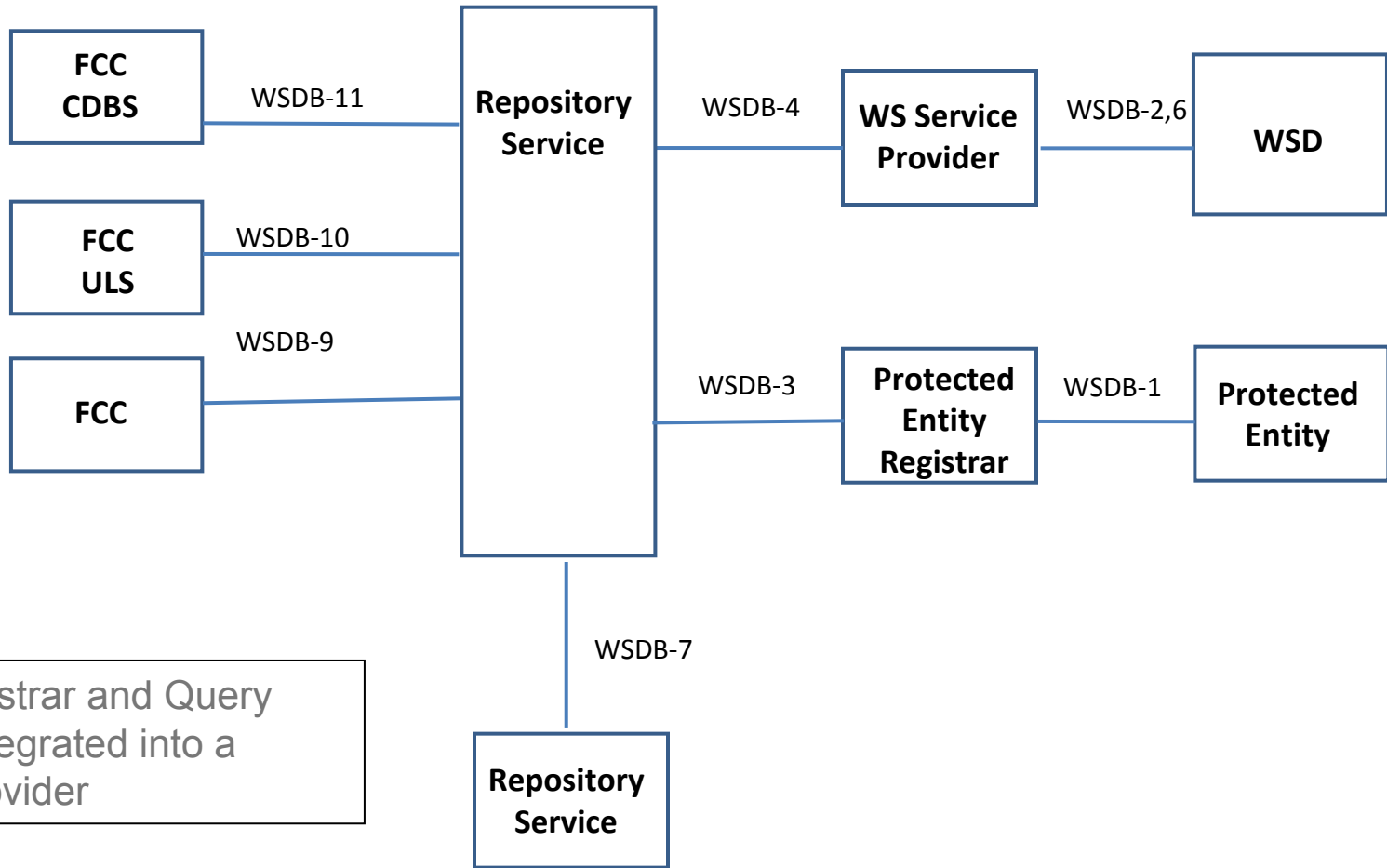
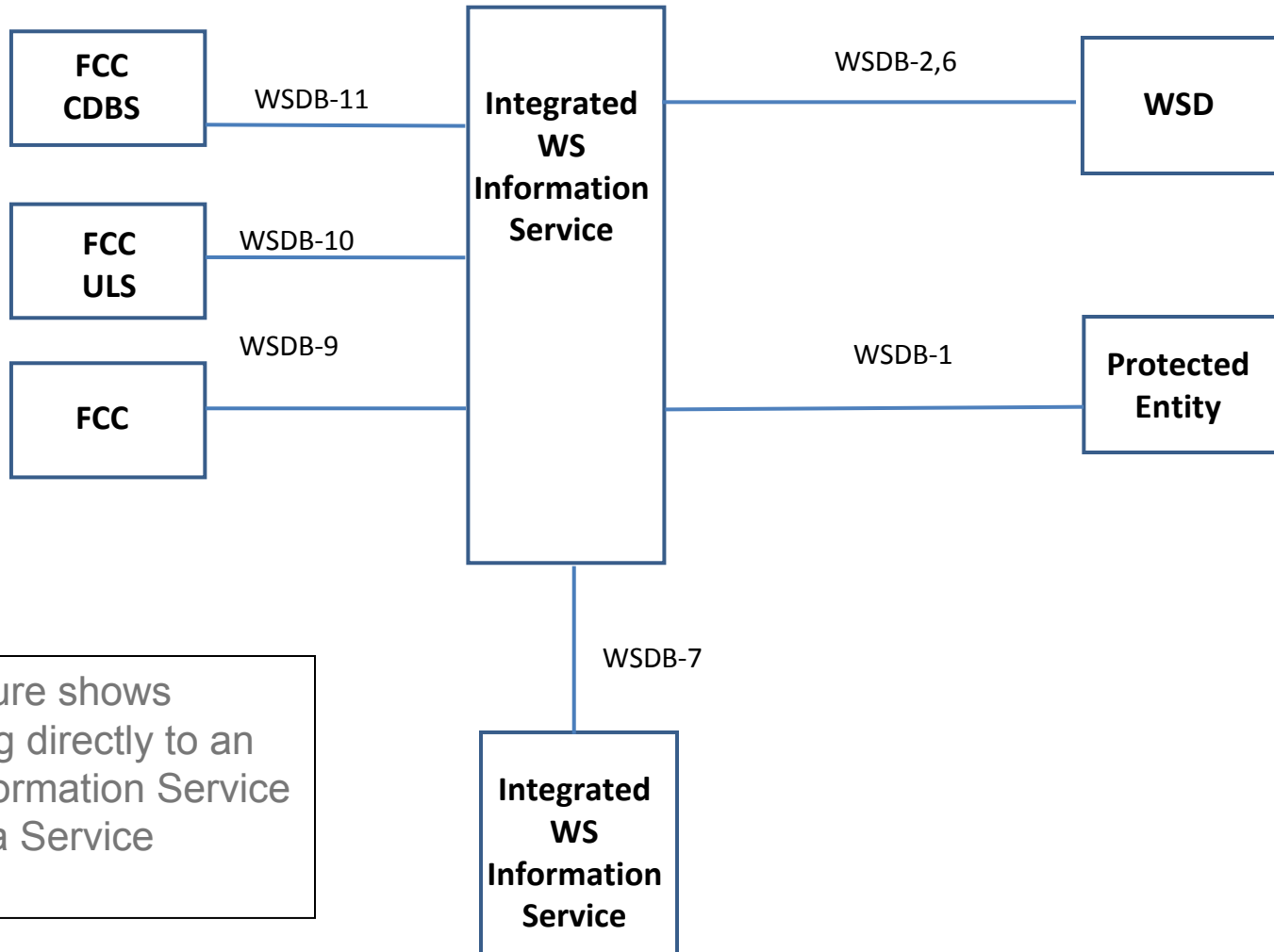
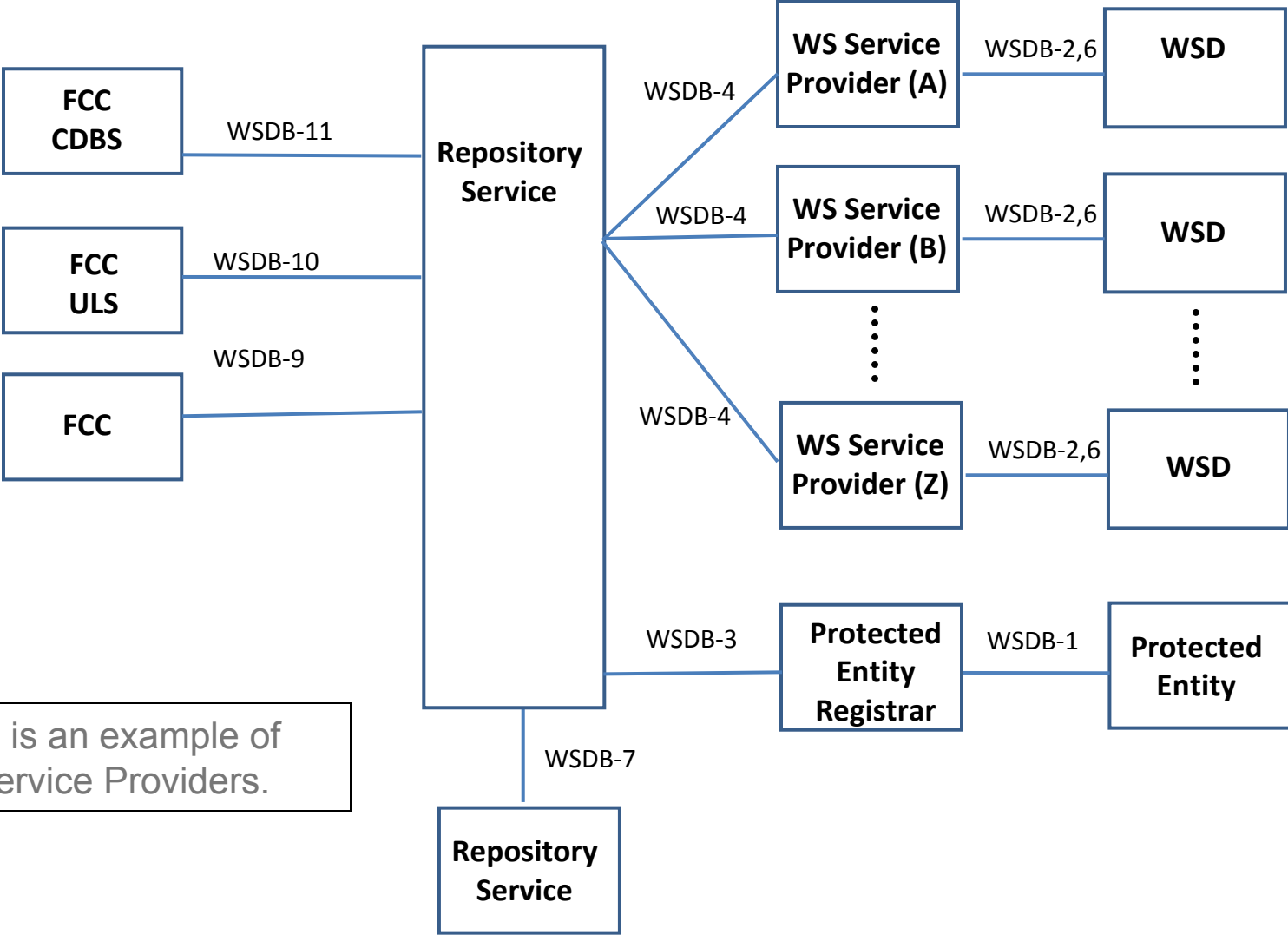


Figure 3. WS Reference Architecture with Combined WSD Registrar, Repository and Query Service



Note: This figure shows devices talking directly to an Integrated Information Service rather than via Service Provider

Figure 4. Multiple Service Providers



Note: This is an example of multiple Service Providers.

WSDB Architecture Definitions

DEVICES/ENTITIES

White Spaces Device (WSD) - Refers to unlicensed devices that will use the White Spaces. This includes Fixed devices and personal/portable devices, both Mode I and Mode II, as defined in the FCC Order. [15.703(o)]

Protected Entity - Refers to locations and services entitled to protection [15.712]

Registrant - The Registrant is an entity that registers data (Protected Entity and registered WSDs) with the Registrar (defined below).

Data Repository – A repository of data that contains ALL the Protected Entity information and all the registered WSD information. [15.713]

ROLES/SERVICES

Registrar - The Registrar receives WSD and/or Protected Entity registrations and provisions those registrations into a Data Repository. A Registrar does not have to provide registration to all devices. Registrars may specialize in registering certain types of devices. For example, there could be a Registrar that just specializes in protected entities.

Repository Service – Manages a Data Repository and communicates information with other services but not necessarily end users

1. Maintains a Data Repository
2. Gets data from FCC databases and synchronizes with those databases [15.715(b)]
3. Provides interface for FCC enforcement of repository information.
4. Accepts registration information from Registrars
5. Disseminates required repository information to Query Service providers
6. Exchanges registration information with other Repository Services

Repository Administrator – Is the legal entity that is responsible and accountable to the FCC for administering a Repository Service.

Query Service – The Query Service returns available channels by combining the lat/lon sent by the device with protected area information received from the Data Repository. The Query Service has no autonomy about the calculation since all the rules are coming from the Repository.

COMBINED ROLES/SERVICES

The Repository Service, Registrar Service and Query Service can be independent services. However, they may in practice be combined. This section defines some terms for combined services.

Integrated White Spaces Information Service – Repository Service, Registrar Service, and Query Service functions are combined into one entity.

White Spaces Service Provider - Registrar for WSD and Query Service functions are combined into one entity.