

Data Model In Support of White Space Database Access Protocols

draft-caulfield-paws-protocol-for-tvws-01

Taipei, November 15, 2011



- How to enable a standardized, lightweight and Rules-compliant Whitespace implementation

- Desirable features

Maximally leverage existing standards and technologies

Only invent (or extend) what you have to

Support in TV and other future bands

Support for capability extensions like coexistence

One data model for many use cases

Our Approach and Proposal

- Develop a data model that
 - Supports current FCC requirements
 - Accommodates currently described use cases
 - Anticipates expected international Rules
 - Can be implemented today
- Contribute to the community for further improvement
 - Consider broader use cases
 - Focus on internationalization
 - Path to standardization

What is it?

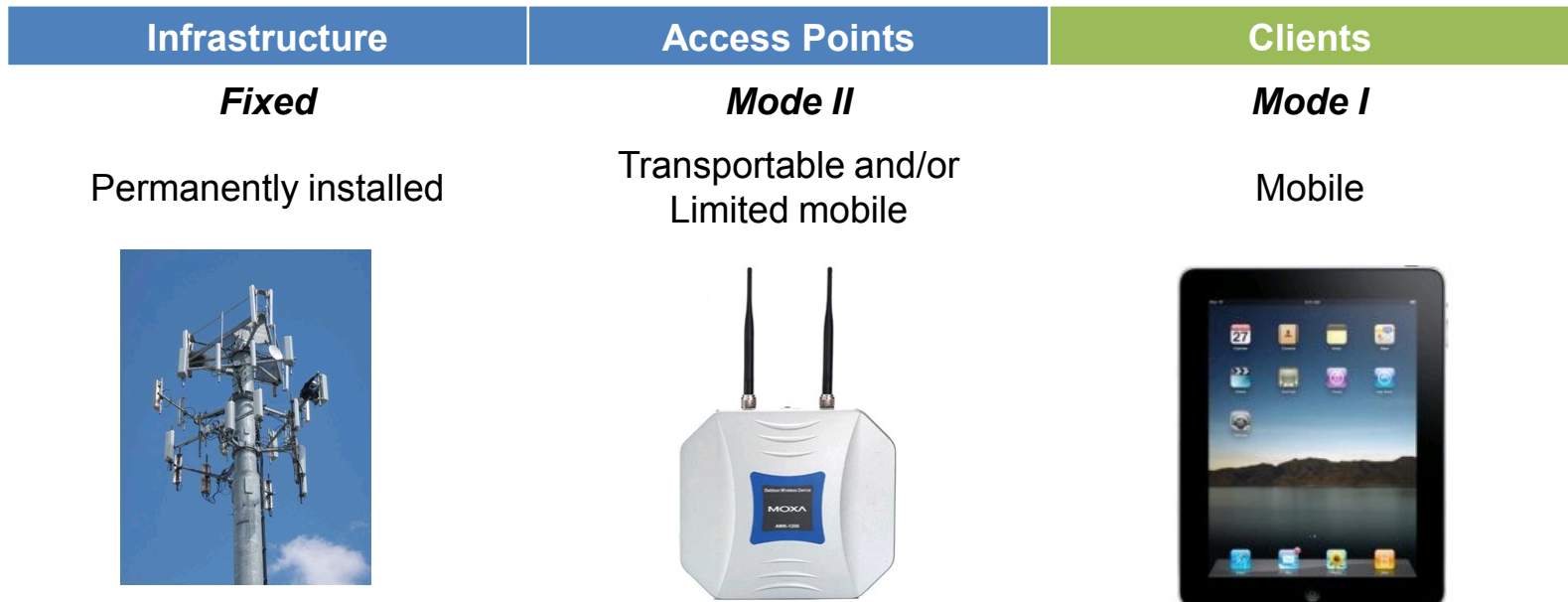
- A Data Model
- A commercial specification
- Published and freely available
- Describes all aspects of a generalized wireless service
 - Broadcast only stations
 - Receive only stations
 - Point to point
 - Point to multi-point
 - Many-to-many (Full and partial mesh)
 - Etc.
- Supports all aspects of US white space implementation

What it is Not

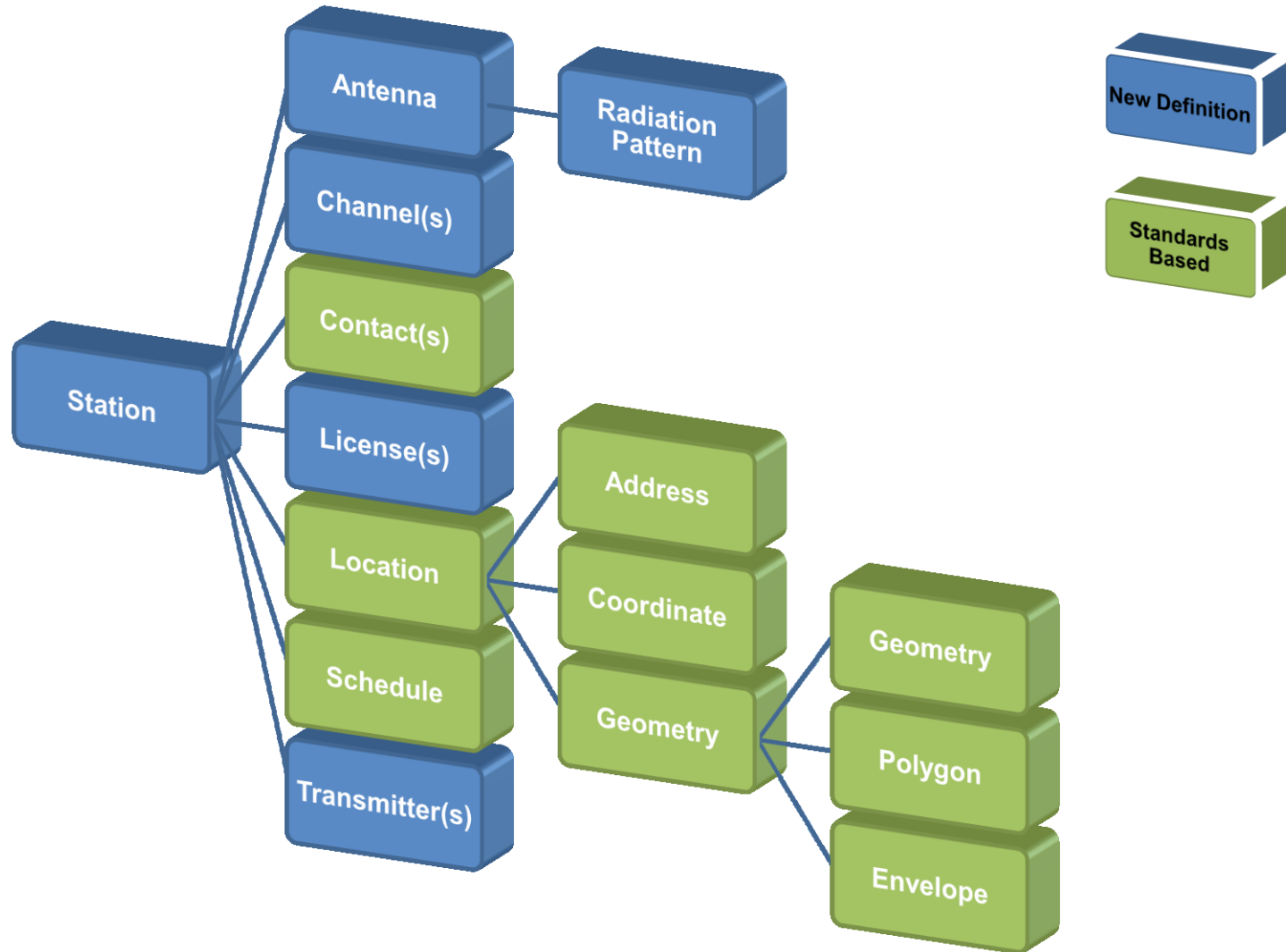
- NOT a protocol
- NOT a white space database
- Not a formal standard
 - (It is a commercial specification)
- Not finalized
 - (Mature but not final)
- Does not specify a security strategy

White Spaces Background and Primer

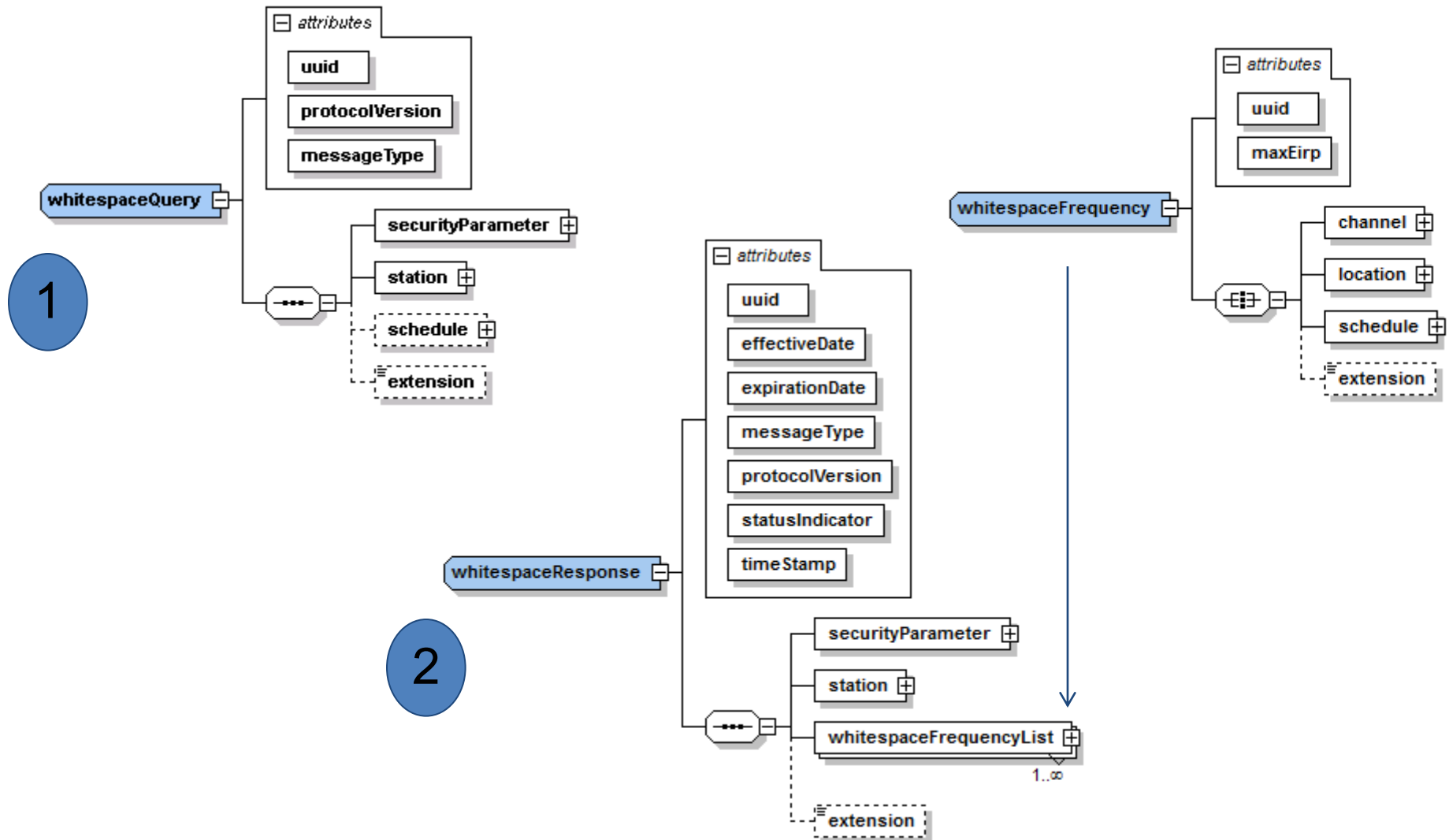
- Television Broadcast frequencies (VHF and UHF)
- Two classes of unlicensed white space device are envisioned
 1. Those that create a network (e.g. access points)
 2. Those that consume a network (e.g. clients)
- Three modes of unlicensed operation are described



Reusable Object Model Hierarchy

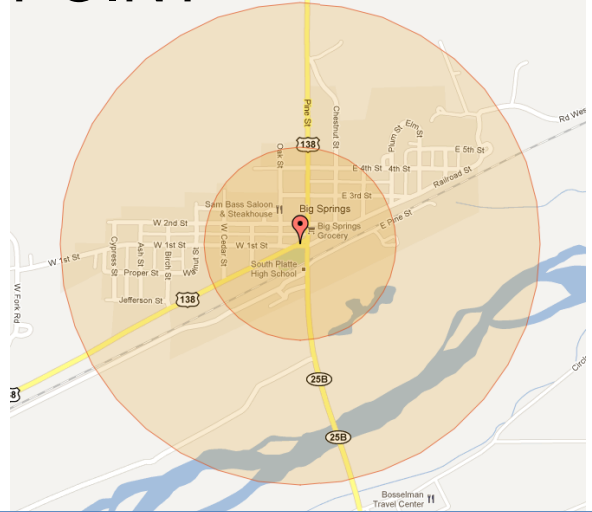


Format for White Space Messaging

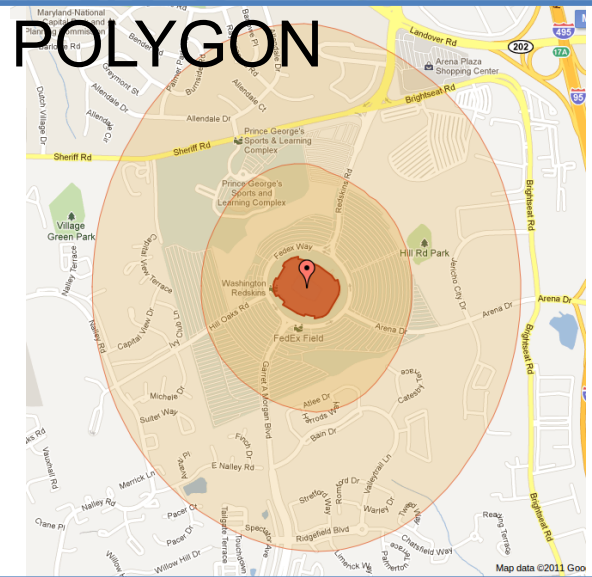


Example Geometries

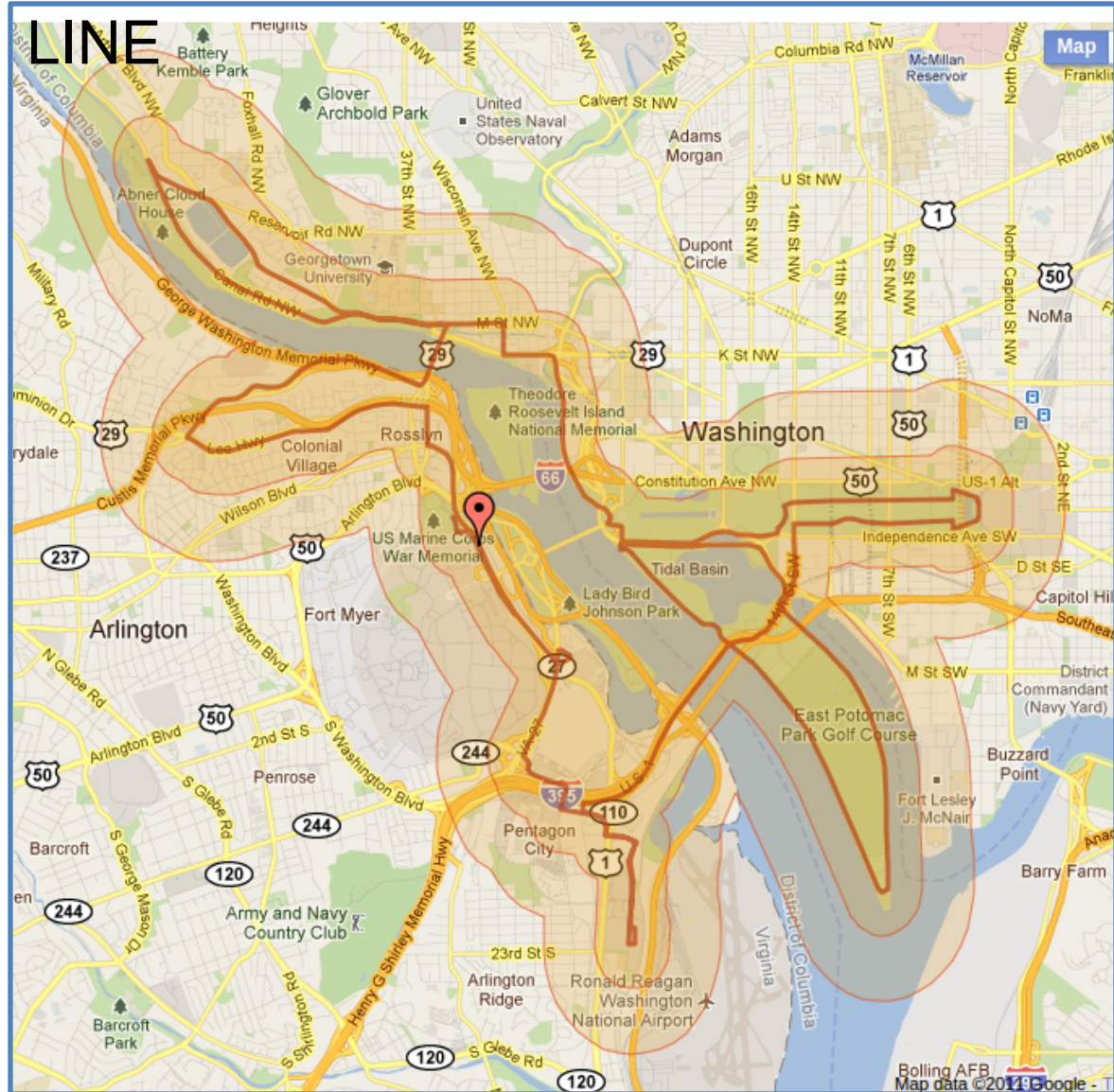
POINT



POLYGON



LINE



Key Bridge Global LLC

1600 Tysons Blvd., Suite 1100

McLean, VA 22102

information@keybridgeglobal.com

