Indoor Accuracy - Test Bed Framework
Working Group #3
E911 Location Accuracy

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Stephen J. Wisely and Richard Craig, Co-Chair's

Test Bed High Level Overview

Ultimate Goal	Fully answer the FCC's questions on indoor performance of E911 location technologies
Morphologies	Dense urban, urban, suburban and rural areas Representative performance data applicable to a cross-section of the country
Building Types	Different building types identified by construction and use commercial, residential, wood, brick, concrete/steel, etc.
Test Points	All technologies will be tested at common, undisclosed test points Deilverable timing may impact number but goal is statistical validity
Testing Entity	All testing, including ground truth creation, to be performed by an independent, 3rd party, testing entity

Test Bed Benefits

Objectivity	• Performance data independently and objectively collected • Blind selection of data points No “cherry picking” or pre-test optimization • Trusted 3rd party administration • Common test methodology across technologies • Broad range of morphologies Show technology strengths and weakness in various environments
Cost savings	Testing costs spread among 7 technologies in stage 1
Results	Equal access to results including ground truth for future campaigns – entire industry benefits

Testing in two stages

Stage 1- Target completion - March 31, 2013	Stage 2 – Target TBD, set up after CSRIC III
• Evaluation of existing technologies and known new technologies	• Evaluation of newer location technologies on an ongoing basis
• Prior to CSRIC III charter termination	• Use methodology developed for Stage 1
• Proposed to be in San Francisco Bay area	• Funding and oversight to be explored
• Provides diverse setting that spans all morphologies while being practical to execute within given time frame	• Test focus refined as FCC needs evolve
	• Geographical coverage expanded as needed

Participating Companies

Company	Technology
Boeing	BTL Iridium only mode
CommScope [1]	DAS proximity detection
Boeing	
NextNav	Wide area beacons
Polaris Wireless	RF Fingerprinting
Qualcomm (in partnership with Verizon)	AGPS+AFLT+MCS
TruePosition	UTDOA
Carriers: ATT, Sprint, T-Mobile and Verizon	

[1]: CommScope will be testing in limited scenarios

Stage 1 Test Bed Funding Model

Selection of Test Bed Entity	Through competitive RFI process - firms familiar to WG3 participants and known to be capable and actively engaged in testing efforts today
Contractual Relationships	Directly between test bed entity and technology company or combination of technology company and participating carrier partner
Confidential & Proprietary Info	• Managed closely by test bed entity, NDAs between test bed company and test participants directly • Carriers can see raw test data for all participants – with NDA only • Technology companies only see their own raw data
Contractual Deliverable	Deliverable to WG3 will be non-proprietary report based on criteria defined in the scope of services developed by WG3
Ultimate Deliverable	Report to the FCC with commentary from WG3 providing some color around feasibility and readiness of technologies – for public record

High Level Test Bed Schedule

2Q12

- ID Participants
- ID Available Carrier Networks
- Develop test methodology & scope
- Financial model
- Geographical location of test area

3Q12

- Finalize: testing management & oversight of the testing, reporting and auditing process
- Identification of specific buildings with access
- Vendor carrier partnership agreement finalization
- Selection of test house
- Agreement on test plan
- Fulfillment of test pre-requisites

4Q12

- Dry run readiness review
- Physical testing
- Data collection and management

1Q13

- Produce Report with Assessment
- Analysis of data - Completion of Preliminary Test Report
- Audit and verification of Test Report
- Assessment Report will have two parts:
  - (1) Performance observed
  - (2) Assessment of technology availability, standards impact, life cycle cost factors, and projected implementation timeline