

DRAFT Enterprise Infrastructure Solutions (EIS)
Request for Proposals

Section C
Description / Specifications / Statement of Work

Wireless Services Extract

Issued by:

General Services Administration
Office of Integrated Technology Services
1800 F St NW
Washington, DC 20405

June 2015

C.2.6 Wireless Services

C.2.6.1 Service Description

C.2.6.1.1 Functional Definition

Wireless Service is a wireless transmission service for mobile terminals. The contractor provides the wireless network.

The services and bandwidth provided depends on the characteristics of the mobile terminals and the technology used in the contractor's wireless network and service platforms, ranging from 2nd generation (2G) to 2.5G/3G to 4G LTE wireless.

Short Messaging Services (SMS), a feature of Wireless Service, provides the capability to send and receive text messages. The text can comprise of any alphanumeric characters; each short message may be up to 160 characters in length.

Multimedia Messaging Service (MMS), a feature of Wireless Service, provides the capability to send and receive multimedia, such as pictures, streaming video, sound, and graphics.

C.2.6.1.2 Standards

Wireless Service shall comply with the following standards, as applicable:

1. 2.5G [based on General Packet Radio Service (GPRS) or Code Division Multiple Access (CDMA-2000 – 1xRTT)]:
 - a) ETSI GSM-MAP.
 - b) TIA IS-41.
2. 3G [based on CDMA] ITU-RTT IMT-2000:
 - a) European ETSI/GSM Wideband CDMA (WCDMA) (also known as Universal Mobile Telecommunications System (UMTS)).
 - b) US CDMA Development Group (CDG) CDMA-2000 Evolution Data Optimized (EV-DO).
3. 4G [based on 3GPP Long Term Evolution (LTE)]:
 - a) ETSI TR25.913.
4. Wireless Application Protocol (WAP):
 - a) WAP Forum (Wireless Application Protocol (WAP 1.1 and 2.0) via WAP Gateway).
 - b) IP Mobility Support, IETF RFC 2002.
5. 3G Security:
 - a) 3GPP TS 21.133.
 - b) NIST FIPS Publication 140-2.

6. Short Messaging Service (SMS)
 - a) 3GPP TS 03.40.
 - b) GSM 03.41.
7. Multimedia Messaging Service (MMS):
 - a) 3GPP TS 23.140.
 - b) Open Mobile Alliance.
8. 5G Future (according to Next Generation Mobile Networks Alliance group) – draft standards are under study, but the service is expected to roll out by 2020:
 - a) Will efficiently support Internet of Things, broadcast-like services, and lifeline communications in times of natural disaster, as well as novel applications such as mission critical control or traffic safety, requiring reduced latency and enhanced reliability.
 - b) May be based on new technologies such as mesh networking and/or beam-division multiple access and relays with group cooperation, whereby devices communicate with each other directly rather than relying on network operators' base stations.
9. The contractor shall comply with new versions, amendments, and modifications made to the above-listed documents/standards including beyond 4G.

C.2.6.1.3 Connectivity

Wireless Service shall connect to and interoperate with the following:

1. The Public Switched Telephone Network (PSTN) and the worldwide dialing plan per ITU Recommendation E.164.
2. Originate and terminate calls to users of commercial satellite-based services.
3. The Internet.
4. Agency mobile terminals, such as, but not limited to cellular phones, smartphones, wireless-enabled Notebook and Laptop PCs, and PDAs.

C.2.6.1.4 Technical Capabilities

The following Wireless Service capabilities are mandatory unless marked optional:

1. Wireless Service shall have the capability to originate and receive voice calls from mobile phones, fixed wireline networks, and satellite-based networks.
2. The contractor shall provide mobile devices (smartphones and cellular phone) as required (see Section C.2.10 Service Related Equipment) supporting the following capabilities:
 - a) Cellular Phones:
 - i. Built-in available features.

- ii. Wireless broadband devices (e.g., mobile Wi-Fi hotspots, MiFi - wireless router that acts as mobile Wi-Fi hotspot).
 - iii. Secure voice communications with FIPS compliant encryption (as available).
 - b) Smartphones:
 - i. Built-in available features.
 - ii. Email.
 - iii. Web browser.
 - iv. Personal Information Management (PIM), including contact and calendar information and documents/notes.
 - v. Ability to sync with leading email, contact/address, and calendar platforms.
 - vi. Vibrate alert to emails and text messages.
 - vii. Ring alert to emails and text messages.
 - viii. Ability to transfer photos/pictures directly to computer.
 - ix. Remote kill (as available).
 - x. Remote wipe (as available).
 - xi. Ability to disable audio, video, and all recording functionality (as available).
 - xii. Transmit and receive data (e.g., run an agency specific app) while conducting a voice session (as available).
- 3. The contractor shall offer the following Wireless Service Plans and plan aspects for government-furnished equipment (GFE) and user-owned devices.
 - a) Voice Service Plans shall include voice calling and text messaging (SMS).
 - b) Data Add-On Service Plans shall include data added to voice service plans. Data may include email, Internet access, video, Multimedia Messaging Service (MMS), and other data.
 - c) Data only Service Plans shall include emails, Internet access, video, MMS, and other data transport not combined with voice service plans.
 - d) (Optional) Machine-to-machine (M2M) – M2M and telemetry products shall provide wireless connectivity to machines, vehicles, or assets
 - e) Mobility applications for mobile device management (see Section C.2.8.6 Managed Mobility Service).
 - f) Mobile Roaming Plans. Domestic and non-domestic mobile roaming plans shall cover voice calls, messaging, multimedia, and data.
 - g) Pooling of domestic data:
 - i. The contractor shall provide pooling of domestic data (gigabytes) within the same billing account at a level specified by the ordering entity (e.g., an entire agency or multiple sub-bureaus within an agency).

- The contractor shall comply with Wireless Enhanced 911 (E911) Rules including Phases I and II as stipulated by the Federal Communications Commission. Refer to <http://www.fcc.gov/911/enhanced/>.

C.2.6.2 Features

The following features are mandatory unless marked optional:

- Wireless Priority Services (WPS). WPS allows authorized National Security and Emergency Preparedness (NS/EP) personnel to gain access to the next available wireless radio channel in order to initiate calls during an emergency when channels may be congested. WPS is invoked by dialing *272 prior to the destination number on wireless terminals that have subscribed to WPS. Refer to <http://wps.ncs.gov/>. Also see Section G.11.4.2, for NS/EP requirements.
- Directory Assistance with Call Completion. This feature allows the user to get at least two look-up phone numbers and connect to one of them.
- Domestic to Non-Domestic Calling. This feature allows a user to make non-domestic calls.
- (Optional) International Mobile Roaming. This feature allows a user to roam internationally with wireless Internet connectivity and communications capability.
- Personal Hotspot. This feature enables a wireless device to be used as a hotspot to connect another device to the Internet or to a private network.
- Indoor cellular system (Femtocells and Microcells) installation to allow and/or improve indoor wireless operation.
- (Optional) Push to Talk With Group Talk shall enable subscribers to connect directly with other users by pressing a button on their wireless terminal. The service shall indicate via an icon on their handset whether a user on their calling list is available. Business colleagues or work teams shall be able to set-up and manage group calling lists. This capability shall support groups of up to 10 participants. Users can create up to 50 group lists and store 100 individual contacts.

C.2.6.3 Interfaces

The contractor shall support the following interfaces for the provisioning of Wireless Service at the SDP, as defined in Section C.2.6.3.1.

C.2.6.3.1 Wireless Service Interfaces

UNI Type	Interface Type and Standard	Payload Data Rate or Bandwidth	Protocol Type
1	Air Link: (Std: GSM and IS-136 TDMA)	Up to 116 Kbps	1. Transparent 2. IP v4 3. IP v6
2	Air Link: (Std: CDMA 1xRTT)	Up to 144 Kbps	1. Transparent 2. IP v4

UNI Type	Interface Type and Standard	Payload Data Rate or Bandwidth	Protocol Type
			3. IP v6
3	Air link: (Std: 3G WCDMA)	Up to 384 Kbps	1. Transparent 2. IP v4 3. IP v6
4	Air Link: (Std: CDMA EVDO)	Up to 500 Kbps	1. Transparent 2. IP v4 3. IP v6
5	Air Link: (Std: WCDMA- HSDPA) [Optional]	Up to 14.4 Mbps	1. Transparent 2. IP v4 3. IP v6
6	Air Link: (Std: 4G LTE)	Up to 100 Mbps (maximum 300 Mbps)	1. ITU 3GPP (TR25.913) 2. IP v4 3. IP v6

C.2.6.4 Performance Metrics

The contractor shall comply with AQL of KPIs for Wireless Service as defined in Section C.2.6.4.1 below.

[Note: GSA recognizes that the radio access network performance is likely to vary depending on location (e.g., urban, suburban, or rural), as well as the technical specifications and capabilities of the deployed infrastructure, such as the radio access equipment.]

C.2.6.4.1 Performance Metrics for Wireless Service

Key Performance Indicator (KPI)	Service Level	Performance Standard (Threshold)	Acceptable Quality Level (AQL)	How Measured
Availability	Routine	99.5%	≥99.5%	See Note 1
Time To Restore (TTR)	Without Dispatch	4 hours	≤ 4 hours	
	With Dispatch	8 hours	≤ 8 hours	

Notes:

1. Voice Service availability is calculated as the average voice service availability for the contractor's network.