Global Identifiers and GeoLocation Attributes

**Job Identifiers:**

\***new**\*

**job-uuid (SM:JobUuid):**  The identifier for a job with a global scope.  The identifier is unique for a Job across all service instances of any service type.    The UUID URN namespace is specified in rfc4122.  The format used for “job-uuid” is the string representation of a UUID as a URN.  An example is “urn:uuid:a6b90f34-d0b1-1956 -7dec-009c4386fe3”.  The version (aka subtype) used is implementation specific.  Version 1 (i.e. time based) is recommended.
**Datatype:** abstract:char[64], IPP:uri MaxLength=64, SM:xs:anyURI maxLen=64

**Note:** Both the local (i.e. job-id) and global (i.e. job-uuid) identifiers are mandatory.  Legacy protocol mappings (e.g. IPP 1.1, WS-Print, LPR) require the local identifier.

**Printer Identifiers:**

\***new**\*

**printer-uuid (SM:ServiceUuid):**  The identifier for a Printer with a global scope.  The identifier is unique across all service instances of any service type.    The UUID URN namespace is specified in rfc4122.  The format used for “printer-uuid” is the string representation of a UUID as a URN.  An example is “urn:uuid:a6b90f34-d0b1-1956 -7dec-009c4386fe3”.  The version (aka subtype) used is implementation specific.  Version 1 (i.e. time based) is recommended.

**Datatype:** abstract:char[64], IPP:uri, SM:xs:anyURI maxLen=64

**Printer Location:**

\***new**\*

**printer-geo-location (SM:ServiceGeoLocation, SM:SystemGeoLocation):**  This identifies the location of the associated device using the World Geodetic System 1984(WGS84).  The means for expressing the location information is a “geo:” URI scheme [RFC5870]

**Datatype:** abstract:char[2048], IPP:uri, SM: anyURI maxLen=2048

references:

[WGS84]

            World Geodetic System 1984, Last revised 2004, National Geospatial-Intelligence Agency, <<https://www1.nga.mil/ProductsServices/GeodesyGeophysics/WorldGeodeticSystem/Pages/default.aspx>>

[RFC1876]

            RFC1876: A Means for Expressing Location Information in the Domain Name System, January 1996, C. Davis, P. Vixie, T. Goodwin, I. Dickinson, <<http://tools.ietf.org/rfc/rfc1876.txt>>

RFC4122]

            RFC4122: A Universally Unique IDentifier (UUID) URN Namespace, July 2005, P. Leach, M. Mealling, R. Salz, <<http://tools.ietf.org/rfc/rfc4122.txt>>

RFC5870]

            RFC5870: A Uniform Resource Identifier for Geographic Locations ('geo' URI), June 2010, A. Mayrhofer, C. Spanring, <<http://tools.ietf.org/rfc/rfc5870.txt>>

Geolocation Example

**2-Dimensional Location of my office printer**

**Google Map URL:**

<http://maps.google.com/maps?f=q&source=s_q&hl=en&geocode=&q=800+phillips+rd+webster+ny+14580&sll=37.0625,-95.677068&sspn=62.226996,106.962891&ie=UTF8&hq=&hnear=800+Phillips+Rd,+Webster,+Monroe,+New+York+14580&ll=43.220973,-77.417162&spn=0.001781,0.003264&t=h&z=19>

**Location representations:**

**Decimal Degrees (WGS84)**

Latitude Longitude
43.220973 -77.417162

**Degrees, Minutes & Seconds**

Latitude Longitude
N43 13 15 W77 25 01

**GPS**

Latitude Longitude
N 43 13.258 W 77 25.030

**UTM**

  X Y

18N 303685 4788191

**My office elevation:**

128 meters (419 feet) above sea level

**Size of Printer:**

91 centimeter (3 feet)

**Margin of error**

183 centimeter (6 feet)

**DNS LOC record (RFC1876)**

Version = 0
Size = 18 (0x12) (encoded centimeter)
HorizontalPrecision = 34 (0x22)  (encoded centimeter)
VerticalPrecision = 34 (0x22)  (encoded centimeter)

Latitude = 2303079151 (0x8946, 0x32EF) (thousandths of a second of arc) )  (2147483648 +(DecimalDegreeLatitude\*60\*60\*1000) ) (North is positive)

Longitude = 1868781865 (0x6F63, 0x5929)(thousandths of a second of arc) ( 2147483648-(DecimalDegreeLongitude\*60\*60\*1000) ) (West is negative)
Altitude = 10012800 (0x0098, 0xC880)(centimeter) (OfficeElevation+10000000)

**GeoLocation (RFC5870)**

geo:43.220973,-77.417162,128;u=1.83