

It is mainly based on TID or TAD depending if the user is situated at his usual point of attachment or he is in a temporal location.

[0296] Appendix 3

[0297] TID and TAD Overview:

[0298] In order to obtain the spatial location of a target, there must be a method to identify and refer to the target. Two identifiers to a target are as follows: (1) Target information ID (TID) and (2) Target record Accessing iD (TAD).

[0299] The TID serves as a persistent, location-independent, resource identifier, even valid after the existence of the target. On the other hand, TAD is generally made of contact information, handling procedure(s), etc., for the repository of the target's location information. TAD can only tell you where/how to get the location information of a given target. There can be more than one TAD for a given TID. It can be time/place dependent, non-persistent, etc.

[0300] For example, the TID of Mike Lee can include information, such as "Name: Mike Lee, Sex: Male, Nationality: xyz, ID: 221166-3355, etc.". The TAD of Mike Lee can include information, such as "Identity: a subset of TID (e.g., his name and ID number),

[0301] Accessing: the contact procedure and address of his social registration office or the repository having his location information, etc."

[0302] A Uniform Resource Identifier (URI) is a compact string of characters for identifying an abstract or physical resource. It is a very suitable identifier for the targets described herein (Sec 2). There are several well-known subsets of URI, such as, Uniform Resource Name (URN), Uniform Resource Locator (URL), etc.

[0303] As a subset of URI, URN is a resource identifier with the specific requirements for enabling location independent identification of a resource, as well as longevity of reference. A TID can be very well named with a URN. For example, the URN based TID of Mike Lee's car can be:

[0304] "urn:namespace-xyz:car=abc-888,registration-state=nnn,owner=mike.lee,nationality=xyz,id=221161-3355,email=mike.lee@hardcom.com,psn=+358405021988".

[0305] The URN based TID of Mike Lee's car can be kept at the car's original registration repository at state nnn. The URI based TADs of Mike Lee's car can be dependent on where the car is located currently. For example,

[0306] (1) when the car is currently not in the country xyz, its TAD can be: "slop:car=abc-888,registration-state=nnn@car1.find.gov:5888;valid-till=31.8.2000",

[0307] (2) when the car is currently in the country xyz, its (default) TAD can be: "slop:abc-888@vehicle.monitoring.eu:transport=tp:2008", where, "slop" is the protocol or scheme for accessing the location information.

[0308] Appendix 4

[0309] Attributes of the Data Format to be Considered:

[0310] The format of the messages has to be defined according to the location needs. The important part of the

message corresponds to the location information, which can be defined in different ways depending of the device. The main fields could contain the following data:

[0311] Co-ordinates: It indicates the geographical location of the user. It can be GPS data or any other format depending on later design.

[0312] Accuracy: To indicate how accurate is the information.

[0313] Time-To-Live: It is the period of time that the information in the message is valid.

[0314] Device-Type: To know what kind of device is providing the information and if it is capable of providing additional information if it is necessary. It can be defined as a mobile, fixed phone, IP device or a simple survival mechanism providing GPS data.

[0315] Device-Static: It defines how static the device is on a scale from 0 to 10, i.e., it can be totally fixed to moving with high velocity. This field is mainly used to determine the latency period between updates. A device with this field equal to 0 indicates that is fixed and it only needs to be updated after long period of time or even it does not need to be updated, it just lets the Time to live expire.

[0316] Device-Status: To indicate in which state the device actually is. It can be fixed, moving, changing LA scope and other possible states.

[0317] Info-Transparency: It indicates the grade of privacy for the information contained in the message. It can have a scale from 0 to 10 depending whether the user wants to make his information totally transparent to other users (10) or totally opaque (0). In that case the LA will receive that information but it cannot replicate the data regarding to the location of that user (except for emergency services).

1. Method for providing a presence service over an internet protocol network comprising the steps of:

receiving application layer signaling from users registering for said presence service,

checking said signaling for spatial location information, and

storing said spatial location information for use in providing said presence service.

2. The method of claim 1, wherein said application layer signaling is according to a session initiation protocol.

3. The method of claim 2, wherein said spatial location information is received as a spatial location payload.

4. The method of claim 1, wherein said spatial location information is received as a spatial location payload.

5. The method of claim 1, further comprising the step of providing access to said spatial location information to one or more location based services.

6. The method of claim 5, wherein said access to said spatial location information is provided to said one or more location based services without providing access to associated user identity information.

7. The method of claim 1, further comprising the step of using said spatial location information in conjunction with a messaging service for providing messages to said users.

8. Method for using a presence service over an internet protocol (IP) network, comprising the steps of: