

SEMANTIC ROUTING SCHEME FOR INFORMATION-CENTRIC NETWORKING

Most of the routing schemes (in DONA/CBCB / PURSUIT/....) are based on publisher/subscriber interaction. It use filters to match rendezvous points between subscriber interests and publisher advertisement compared to the conventional IP.

Due to the high mobility of terminals in nowadays networks, publisher and subscriber should hold a *Dynamic Address* that may be changed according to their place in the network.

To serve Subscribers requesting Information with *Any Data Content* from *Any Publisher*, name should represent the content. Additionally, to serve requesting *Specific Data Content* from *Any Publisher* name should be unique.

Our proposed naming scheme is based on three dimensions knowing that the user (publisher/subscriber) should label the data with least one dimension. The three dimensions are:

1. Geographical address ex. Ipv6: its importance is in simplify routing and it is dynamic that is based on the location of the publisher/subscriber in the network and this address helps in mobility
2. User (publisher/subscriber) ID address is related to the terminal as MAC address (media access control address).
3. Semantic address: it is set of keywords that define the data.

Semantic resolution server (broker) will translate the set of keywords to a hierarchal address based on a predefined semantic tree that is known at all routers.

The figure below is extracted from the ICN architecture and shows the naming scheme.

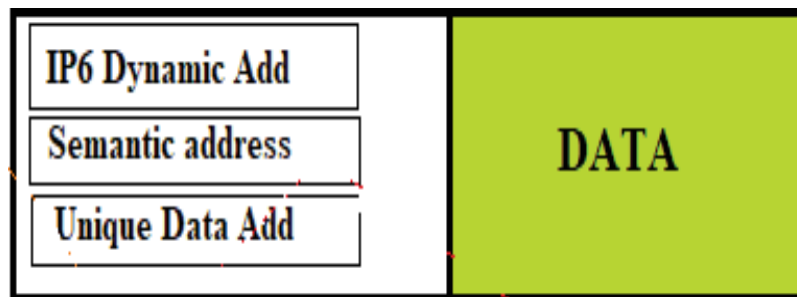


Figure. SICN naming scheme