

GEOTAB[®]

W3C Gen2 dynamic registry

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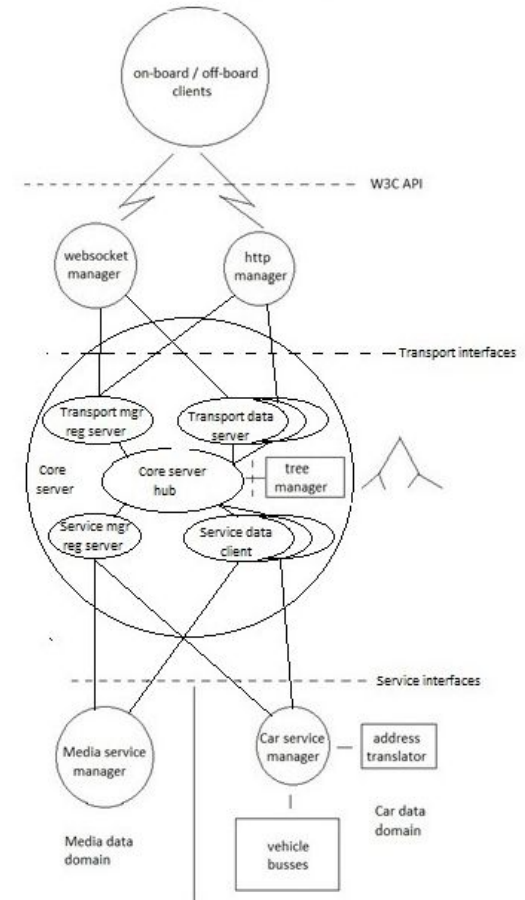


Why separate API for dynamic registration of services?

- Gen2/VSS focuses on the vehicle signal domain.
 - The “clients” registering new services are typically not the clients requesting the services.
 - Registering of new services is not a frequent operation.
- This may require a different level of security than what the main Gen2 API supports.
 - Add/delete services is conceptually different from read/update/subscribe to services.
- The service add/delete use case is in the vehicle signal domain quite different from in the media domain. (Example car heater vs playlist).

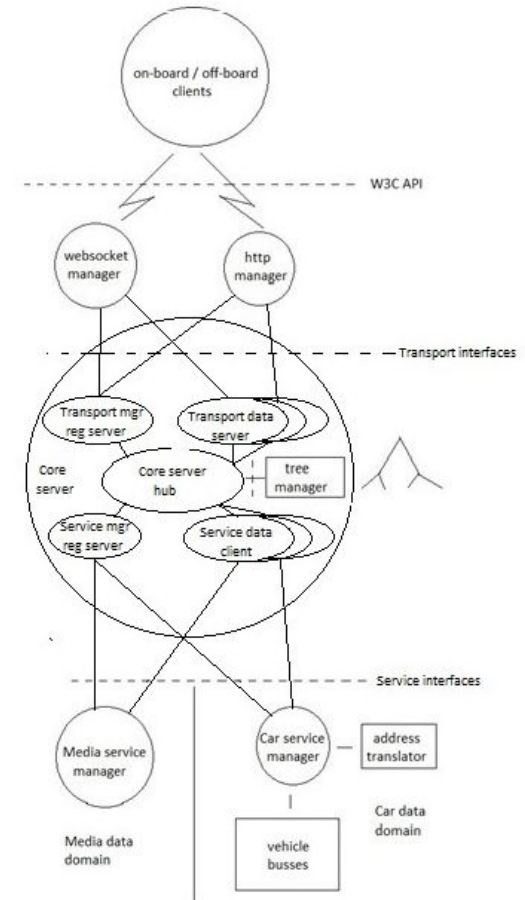
Gen2 Dynamic Registry API (1)

- Concept derived from the Sw architecture used in the W3C vehicle API implementation project.
 - https://github.com/MEAE-GOT/W3C_VehicleSignalInterfaceImpl
- Sw architecture entities:
 - Clients
 - Server, composed of:
 - Transport managers
 - Service managers
 - Core server



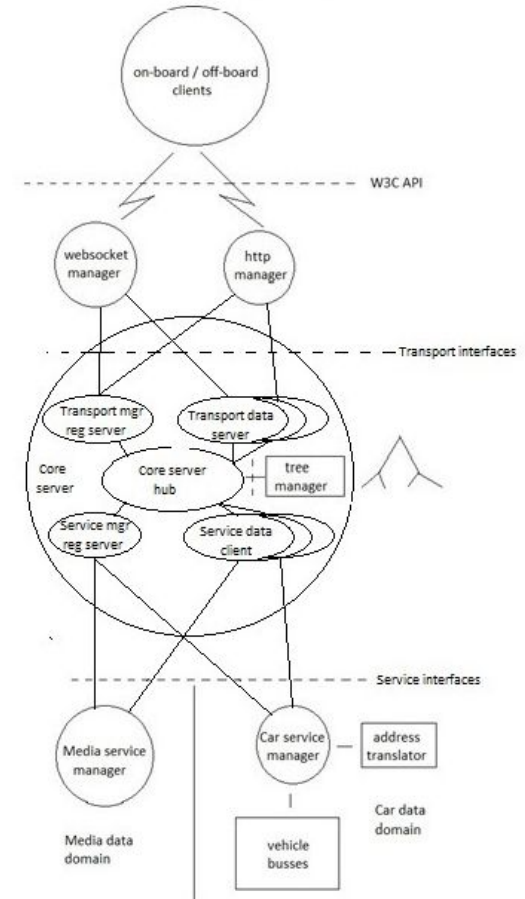
Gen2 dynamic registry API (2)

- Gen2 API = W3C API at the top in figure
- Gen2 DR API = Service interface at the bottom in figure
- Service managers register services with the Core server.
 - Subtree representing service is added to the main tree.
 - Client requests to the new service are routed to the service manager that registered it.
- Clients can then use the Gen2 service discovery request to find out about the new services, and then issue read/update/subscribe requests to it.



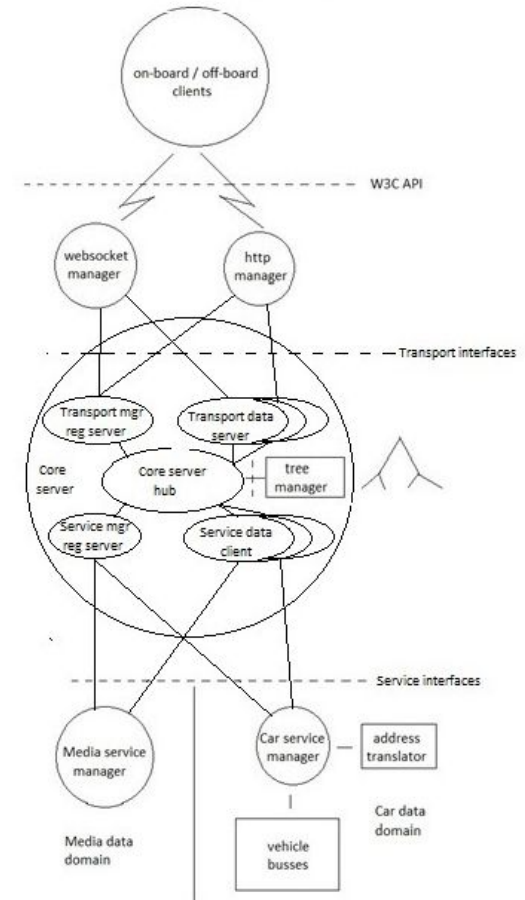
Gen2 dynamic registry API (3)

- Recommended practise (API supports other practises)
 - The bulk of the tree comes from the VSS defined tree, which is served by one service manager.
 - Additional services can be registered(/deregistered) by other service managers.
 - Provides a file containing the “compiled” subtree, and anchor point in static tree.



Gen2 dynamic registry API (4)

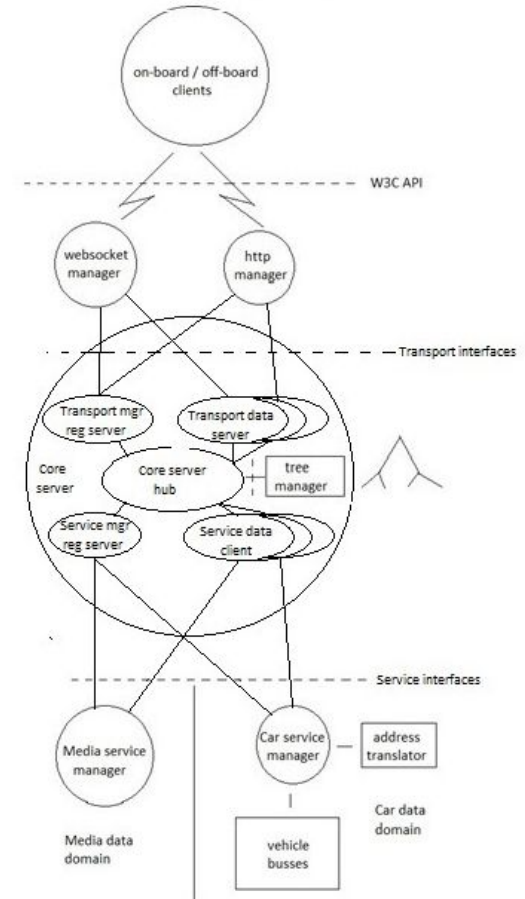
- Direct server access
 - The root node of the subtree provided by the service manager contains the property "serverUri":<uri-to-server>
 - A client can then, after a service discovery request to obtain the server URI, either use that to issue requests directly to this server, or issue the requests via the "main" server, which then will route it to the service manager (which typically is the other server).



Gen2 dynamic registry API (5)

- Registry of physically separate tree
 - The subtree provided by the service manager contains only one branch node (without children) containing the property "serverUri":<uri-to-server>.
 - A client can only then, after a service discovery request to obtain the server URI, use that to issue requests directly to this server (where first request typically is a service discovery).

- Use cases for this alternative are:
 - When very large subtrees are to be registered, maybe complete taxonomies for other domains the the Vehicle Domain.
 - When subtrees use a data model that differ from VSS.
 - Only the branch node logically linking to the separate tree needs to have VSS format.





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