Enabler Release Definition for Dynamic Navigation (DynNav)

Approved Version 1.1 – 04 Aug 2015

Open Mobile Alliance

OMA-ERELD-DynNav-V1_1-20150804-A

Contents

Tables

1. Scope

The scope of this document is limited to the Enabler Release Definition of DynNav Enabler 1.1 according to OMA Release process and the Enabler Release specification baseline listed in section 5.

2. References

2.1 Normative References

[ISO TTI] "Traffic and Travel Information (TTI)" ISO/TS 24530, URL:http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_tc_browse.htm?commid=54706

[RFC2119] "Key words for use in RFCs to Indicate Requirement Levels", S. Bradner, March 1997, URL:http://www.ietf.org/rfc/rfc2119.txt

[SCRRULES] "SCR Rules and Procedures", Open Mobile Alliance™, OMA-ORG-SCR_Rules_and_Procedures, URL:http://www.openmobilealliance.org/

3. Terminology and Conventions

3.1 Conventions

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as described in [RFC2119].

All sections and appendixes, except “Scope”, "Release Version Overview" and “Conformance Requirements Notation Details”, are normative, unless they are explicitly indicated to be informative.

3.2 Definitions

DynNav Client	An entity that is in charge of interacting with a DynNav Server to get optimal route(s) or real-time and predicted traffic information and complimentary data.
DynNav Server	An entity that is in charge of providing to the application optimal route(s), real-time and forecasted traffic information, and complimentary data.
Enabler Release	Collection of specifications that combined together form an enabler for a service area, e.g. a download enabler, a browsing enabler, a messaging enabler, a location enabler, etc. The specifications that are forming an enabler should combined fulfil a number of related market requirements.
Minimum Functionality Description	Description of the guaranteed features and functionality that will be enabled by implementing the minimum mandatory part of the Enabler Release.
Navigation Device	An entity that, using GNSS service, assists the driver showing correct route to reach the final destination. This entity may process real-time and predicted traffic information and dynamically estimates the optimal route, according to user preferences.
Network Performance Parameter	Information regarding the performances (i.e. speed, delay and travel time) of road segments related to an area or a route.
Point Of Interest	POI describes information about locations such as name, category, unique identifier, or civic address.
Route Information	Information which coordinates of segment end points and complimentary data from the defined origin and the destination
Traffic Information	Information which consists of traffic events and network performance parameters related to an area or a route.

3.3 Abbreviations

API	Application Programming Interface
ND	Navigation Device
OMA	Open Mobile Alliance
POI	Point Of Interest
REST	REpresentational State Transfer
SCR	Static Conformance Requirements
TPEG	Transport Protocol Expert Group
TS	Technical Specification
URL	Uniform Resource Locator
XML	eXtensible Markup Language
XSD	XML Schema Definition

4. Release Version Overview

The DynNav Enabler provides an overall framework (mechanisms, functionalities, APIs, and etc.) to enable dynamic routing of vehicle based on traffic information.

The following areas will be covered as part of the scope of the enabler:

- Delivering traffic information and/or route information to the Navigation Device (ND);
- Delivering value added information to the ND, such as Point Of Interest (POI);

DynNav Enabler will reuse as much as possible existing technologies. In particular, with respect to interface specification, it is in the scope of this Enabler:

- to reuse traffic information data formats defined by TPEG in [ISO TTI],

4.1 Version 1.0 Functionality

The version 1.0 of the DynNav Enabler defines an overall framework that enables dynamic vehicles navigation service based on traffic information over a mobile network.

The core functionalities exposed by the DynNav Enabler include the following operations:

- Request and Provide a set of routes based on the journey parameters defined by the user
- Provide traffic information related to the route and an area defined by the ND
- Provide complementary information(i.e. POI) related to defined routes and/or areas
- Manage subscriptions to notification services for updates on traffic information and alternative route proposal

4.2 Version 1.1 Functionality

DynNav 1.1 supports the following functionalities additional to those in Version 1.0.

- Additional journey definition such as recurrent routes including time conditions and routes to the 3rd party for Smart ND
- Journey and route information sharing with interested 3rd parties through public resources
- Request and provide the optimal route to visit multiple waypoints complying with time and priority constraints
- Provide the list of POIs accessible within a defined travelling time/distance, and additionally related route information to the selected POI
- Supporting the common traffic information for reuse as opposed to the user-specific traffic information

5. Document Listing for DynNav 1.1

This section is normative.

Doc Ref	Permanent Document Reference	Description
Combined Enabler Release		
[DynNav ER]	OMA-ER-DynNav-V1_1-20150804-A	Requirements and Architecture Document for DynNav 1.1 Enabler
Technical Specification		
[DynNav TS]	OMA-TS-REST_NetAPI_DynNav-V1_1-20150804-A	Technical Specification for DynNav 1.1 Enabler
Supporting File		
[REST_SUP_DYNNAV]	OMA-SUP-XSD_rest_DynNav-V1_1-20150804-A	XSD schema for XML data structure definition

Table 1: Listing of Documents in DynNav Enabler

6. OMNA Considerations

The REST_NetAPI_DynNav enabler introduces the following namespaces.

Note that in order to maintain compatibility between minor versions of the same major version, only the major version is reflected in the namespace identifier. Further note that subsequent minor versions of the same XML schema (e.g. 1.1) will be registered against the same namespace identifier.

Description	Registered URN	Schema Links
Dynamic Navigation	urn:oma:xml:rest:netapi:dynnav:1.1	http://www.openmobilealliance.org/tech/profiles/rest_netapi_dynnav-v1_1.xsd

Table 2: OMNA Namespaces

7. Conformance Requirements Notation Details

This section is informative.

The tables in following chapters use the following notation:

Item: Entry in this column MUST be a valid ScrItem according to [SCRRULES].

Feature/Application: Entry in this column SHOULD be a short descriptive label to the **Item** in question.

Requirement: Expression in the column MUST be a valid TerminalExpression according to [SCRRULES] and it MUST accurately reflect the architectural requirement of the **Item** in question.

8. ERDEF for DynNav 1.1 - Client Requirements

Not Applicable in RESTfull NetAPI interface definition

9. ERDEF for DynNav 1.1 - Server Requirements

Static Conformance Requirements for a Navigation Server are specified in Appendix B.2 of [DynNav TS].

Appendix A. Change History (Informative)

A.1 Approved Version History

Reference	Date	Description
OMA-ERELD-DynNav-V1_1-20150804-A	04 Aug 2015	Status changed to Approved by TP TP Ref # OMA-TP-2015-0122-INP_DynNav_V1_1_ERP_for_final_Approval