EUCARIS

XML 8.0 Message Specification
Initial Vehicle Information

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Document control

Version	Date	Remarks
0.0.10	6-3-2025	Renamed RequestByVin to IVIRequestByVin Removed node ***InitialVehicleInformation*** in the IVIResponse, IVINotification message
0.0.9	17-2-2025	In the header the name of IviVersionDate has changed to IviVersionDateTime.
0.0.8	4-2-2025	The header of the new IVI file contains DesignatedTypeApprovalCountry. Renamed the fieldname
0.0.7	9-1-2025	In the IVINotification message also V1 can be in the Notification.
0.0.6	6-1-2025	Added node ***InitialVehicleInformation*** in the IVIResponse, IVINotification message, this is the name of the loaded IVI file.
0.0.5	6-12-2024	Processed comments during build of xsd
0.0.4	27-11-2024	Processed comments after refinement with building team.
0.0.3	13-11-2024	Processed comments from Sjaak Kempe.
0.0.2	11-9-2024	Changed messagetypes and trivial details.
0.0.1	18-8-2024	First Draft, based on old xml specification

Related Documentation

ID	Version	Date	Name
[DOC-0]		10-4-2024	Commission Implementing Regulation (EU) 2024/1061 laying down rules on the secure exchange of data and read-only access.
[DOC-1]		4-2-2021	Commission Implementing Regulation (EU) 2021/133 Implementing Regulation (EU) 2018/858 of the European Parliament and of the Council as regards the basic format, structure, and the means of exchange of the data of the certificate of conformity in electronic format
[DOC-2]		15-4-2020	Commission Implementing Regulation (EU) 2020/683 implementing Regulation (EU) 2018/858 of the European Parliament and of the Council with regards to the administrative requirements for the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles
[DOC-3]		30-5-2018	Regulation (EU) 2018/858 of the European Parliament and of the Council on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, amending Regulations (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC
[DOC-4]			Commission Regulation (EU) No. 183/2011 amending Annexes IV and VI to Directive 2007/46/EC
[WWW-1]			Information about CoC data exchange on the EReg website: https://www.ereg-association.eu/topic-groups/topic-group-xii/ https://www.ereg-association.eu/search/?query=ivi
[DOC-5]	1.0.4	13-1-2021	EUCARIS 8.0 XML Message Specification EUCARIS Envelope
[DOC-6]	0.0.12	22-3-2021	EUCARIS 8.0 Core UC-01 Send Message to EUCARIS
[DOC-7]			EUCARIS 8.0 Core UC-02 Retrieve Message from EUCARIS
[DOC-8]			EUCARIS 8.0 Core UC-07 Deliver EUCARIS Envelope
[DOC-9]			EUCARIS 8.0 General Overview

Contents

1. Introduction

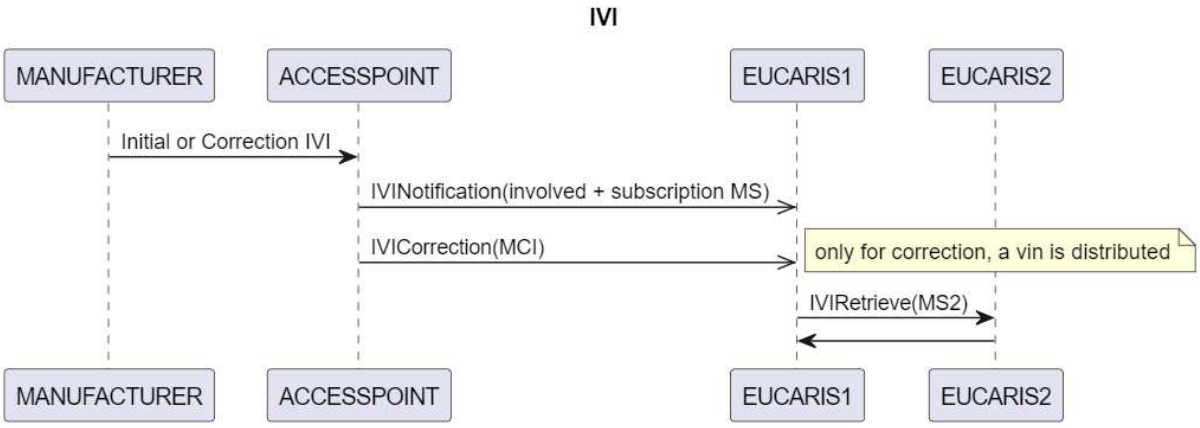
1.1 General

Legal basis under the messages described in this document, is [DOC-3]. The implementing regulations [DOC-1] and [DOC-2] describe cross-border exchanges between member states for IVI related purposes.

Information exchange of initial vehicle information, which is contains the CoC data. The data is stored in an IVI database. Within EUCARIS, the following functionalities can be done:

- Retrieve initial vehicle information based on a Vehicle Identification Number, from one member state or via a search in all connected member states. For this two message services are defined, one for countries and one for citizens ([DOC-3], Art. 12 sub-2). The last message service is created to have more control over the usage of the service.
- Send Notification initial vehicle information to the involved member states (DesignatedTypeApprovalCountry and IntendedCountryRegistration) and subscription countries.
- Notify all connected member states that a corrected IVI has been published.

The general process is shown in the sequence diagram below:



Information exchange of initial vehicle information within EUCARIS is based on an XSD created by a joint EReg-TAAM working group (see also [WWW-1]).
The purpose of the XSD schema is to receive and exchange vehicle information between vehicle manufacturers, type approval authorities and registration authorities. The scheme is made for vehicle categories M, N, O, L and T, including M1 vehicles with individual approval compliant with 183/2011.

Initial vehicle information contains the following information:

- CoC Data. *This is the reply derived from the CoC, structured in such a way that the data can be easily exchanged.*

There may be more than one reply per vehicle (e.g., for a multi-stage type-approval process). With one query, all IVI's found are delivered.
When forwarding an IVI, one specific dataset is always involved.

Note: This document uses the term “CoC data” to indicate either CoC data or data of an individually approved vehicle.

1.2 Definitions

CoC	Certificate of Conformity. A producer's declaration that a vehicle complies with the given approval type. The CoC contains information about the vehicle and its producer's identification, type approval number, and technical specifications.
EReg	Association of European Vehicle and Driver Registration Authorities.
EUCARIS	European Car and Driving Licence Information System.
IVI	Initial Vehicle Information also called eCoc (Electronic Certificate of Conformity)
MCI	Multi Country Inquiry. Synonym to "broadcasting" A request message, coming from one EUCARIS MS, is sent to multiple MS. The recipients are either determined by EUCARIS (All MS that support IVI), or by the (user of the) client application, by submitting a list of MS.
MS	Member State, i.e., country using EUCARIS.
NCP	National Contact Point, a designated competent authority of a Member State for the cross-border exchange of IVI data.
TAA	Type Approval Authority
TAAM	Type Approval Authorities Meetings.
WVTA	Whole Vehicle Type Approval
(XML) node	Element bundling underlying XML elements. In an XSD, an XML node is a complex type of element, containing a sequence of underlying elements.
(XML) element	The name and value of a certain data item.
XSD	XML Schema Definition

2. IVI architecture

IVI message-services are available on EUCARIS core, two EUCARIS cores can directly interact with each other(peer-2-peer). There is no EU HUB or broker involved.

The new IVI 2.0 version is only supported in V8 message services. It is still possible that old V7 services with version 1.x are used, the V7 messages are however **not** transformed to V8. In the V8 message service all IVI versions (version 1.x and 2.0) are supported.

From 5th July 2026 all member states need to use the new IVI 2.0 message services. After this date, the old V7 service becomes obsolete and will be removed.

For the connection between manufacturers and National Access Points, Member States can use a EUCARIS NAP solution, which implements legal requirements and best practices of EReg Topic Group XII.

The connection between manufacturers and the access points will be a national design. It should follow the best practices of topic group XII or use the EUCARIS NAP solution. The connection to the vehicle register (legacy system) is also a Member States' design. It is out of scope for EUCARIS.

3. EUCARIS IVI message services

3.1 Available web services

The following EUCARIS services are available for IVI:

- *IVIRetrieve – via this service the IVI data can be retrieved by competent authorities.*
- *IVIRetrievePublic – via this service a citizen or company can retrieve IVI data.*
- *IVINotification – forward the initial vehicle information to involved member states and subscription member states.*
- *IVICorrection – send a notification of correction to alle connected member states.*

The retrieval service (*IVIRetrieve/IVIRetrievePublic*) are synchronous services, i.e., an incoming request is picked up immediately and is answered within 20 seconds. The retrieval service is described in Chapter 4, the public service in Chapter 5.
The IVI forwarding notification service and correction service, are asynchronous services, i.e., the notification arrives in a queue.

Important:
It is advised to pick the notifications from the queue for local processing, after a period of three months the information will be purged automatically from the queue.

The IVINotification service is described in Chapter 6, the IVICorrection service is described in Chapter 7.

Length, format, and functional use of message elements is described in Annex A – Nodes and elements.
IVI messages are exchanged within a EUCARIS Envelope. The EUCARIS Envelope is specified in [DOC-5].

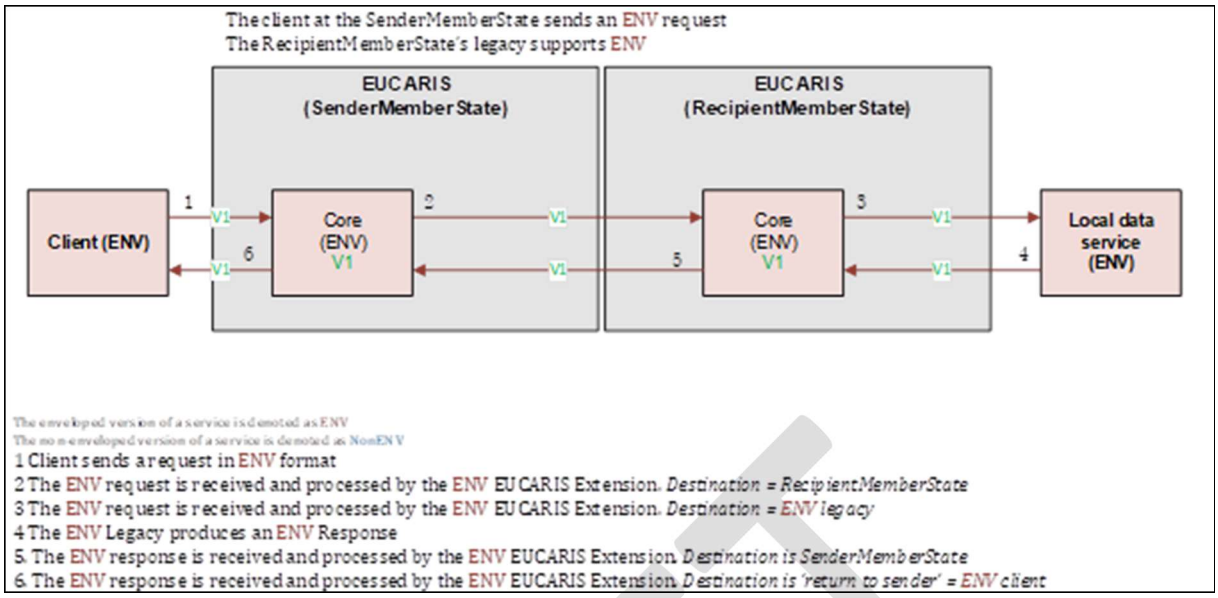
3.2 Synchronous and asynchronous processing

The *IVIRetrieve* and *IVIRetrievePublic* message services are synchronous services, i.e. a request message is prepared using the EUCARIS web client or a customized client, and is sent to the recipient Member State in an interactive, synchronous session, in which MS-resp passes through the request to its vehicle register and passes through the response from its vehicle register to MS-req, where it is presented to the requesting client.

For all services, requests to one specific Member State are supported, including the possibility to send a request to ‘self’ (sender and recipient member state are the same). For the retrieve services, an ‘MCI’ request also called broadcast is supported (i.e., the request message is either sent to all, or a series of Member States connected to the IVI network). If MCI is not supported, requests are always sent to one specific Member State. See Ch. 3.3.2 for an overview in which message services MCI/Broadcast is supported.

3.2.1 Synchronous processing

This figure gives a schematic representation of a request and response dialogue that is processed synchronously.



The synchronous flow is described in detail in [DOC-6]. Refer to **basic flow**.

The sending of requests and processing of responses is conducted in a synchronous session, i.e., the time out is such that a user behind the client application can fire a request and wait for the response (e.g., 10 seconds).

3.2.2 Asynchronous processing

The notification and corrections are transferred asynchronously, i.e. the message is sent via a queue mechanism, and at the receiving Member State the message is made retrievable for a domestic application (EUCARIS Web Client or a custom application) for presenting it to an end user and process it, e.g. reply to it.

The workflow processing by EUCARIS is described in [DOC-6].

3.3 XML message Specs

For conventions used in the XML Message Specification, refer to [DOC-5].

Messages are sent within the EUCARIS Envelope. For envelope specs, refer to [DOC-5]. This includes specification of the *ErrorNotification* message.

3.3.1 Message Services

For the EUCARIS Envelope, refer to [DOC-5].

The characteristics of the IVI message service is the following:

Message Service Group	Message Service	Workflow category	PriorityCode	Number of inquiries

				(messages) in one envelope
IVI	IVIRetrieve	Request/Response	1 (Synchronous)	1
IVI	IVIRetrievePublic	Request/Response	1 (Synchronous)	1
IVI	IVINotification	Notification	2 (Asynchronous)	1
IVI	IVICorrection	Notification	2 (Asynchronous)	1

3.3.2 MessageTypes and Versions

For IVI, the following messageTypes and Version are introduced.

Message Service	Message 'type' (Message name)	Version	Broadcast
IVIRetrieve	IVIRequestByVin	1.0	SmartResponseSelection
	IVIResponse	1.0	
IVIRetrievePublic	IVIRequestByVin	1.0	SmartResponseSelection
	IVIResponse	1.0	
IVINotification	IVINotification	1.0	SmartNotitificationSelection
IVICorrection	IVICorrectionNotification	1.0	Regular

3.4 Requesting side envelope

IVI messages are contained within the EUCARIS envelope, of which the message specifications are described in [DOC-5]. This chapter describes how a client application should populate the envelope items when submitting an IVI message to EUCARIS.

For the IVI message the following elements need to be delivered in the envelope:

- ExternalMessageId, a unique identifier for the sender of the request.
- OrganisationName, the name of the IVI authority managing the request.
- SenderName, the user or system making the request.

NestingLevel	Item	Occ	Type	Remarks
1	***EucarisEnvelope***			
2	(version)	1	Enum	1.0
2	***Header***	1		The header section contains routing info.
3	RecipientMemberStateCode	1	Enum	See also Ch. 3.3.2 if broadcast is allowed One or more Member States – coding system ISO 3166-1 alpha-2 OR 'MCI.' Depending on the Message Service/type it is definded if MCI

NestingLevel	Item	Occ	Type	Remarks
				(broadcast) is allowed or not. See section 3.3.2
3	SenderMemberStateCode	1	Enum	The Member State the requesting authority represents– coding system ISO 3166-1 alpha-2
2	***Workflow***	1		The workflow section contains the metadata of the workflow.
3	WorkflowId	0		***Is assigned by EUCARIS***. A client application shall not populate this item.
3	***Info***	1		The *Info* section is mandatory to provide.
4	ExternalWorkflowId	1	Text	The workflowId assigned by the client application. Either use a UUID, at least version 4, or use a reference unique to the initiator of the workflow. This id will be returned in the response message.
4	MessageService	1	Text	The name of the message service. Must match with the (type) declaration at the ***Messages*** or ***Message*** level. Possible values: • 'IVIRetrieve' • 'IVIRetrievePublic' • 'IVINotification' • 'IVICorrection'
4	ServiceExecutionReasonCode	1	Enum	Denotes the business reason the request is sent. Possible values for an IVI request: **Code** / **Matching description** 0 – Not specified (old situation) 2 – (Vehicle) Import 4 – Inform / Notify / Legal obligation to inform or notify a competent authority 6 – Application for vehicle registration 13 – Inform the public / a client / a citizen
4	ExternalReferenceNumber	0-1	Text	Can be used to provide a reference number from a domestic system. If and how this element is used, is a Member State's decision. If populated, it will be returned in the response message.

NestingLevel	Item	Occ	Type	Remarks
4	InitiatingParticipantName	0		***Is assigned by EUCARIS***. A client application shall not populate this item.
4	InitiatingOrganisationCode	1	Enum	The type of organisation that is responsible for sending out the request. Possible values for an IVI request/notification/correction: 0 = Not specified 1 = Registration office 2 = Police 3 = Customs 4 = Operator 7 = Vehicle inspection authority 12 = Private sector organisation 21 = Citizen 22 = Type Approval Authority
4	InitiatingOrganisationName	1	Text	The (official) name of the organisation that is responsible for sending the request.
4	InitiatingSenderName	1	Text	Name of a user or alias of a user (retraceable to the actual user in an audit trail), or name of an automated system, responsible for sending the request.
4	InitiatingDateTime	1	DT	Date and time the request emerged.
4	PriorityCode	1	Enum	Denotes the type of processing expected by the client application. Possible values: 1. (Synchronous) for IVIRetrieve, IVIRetrievePublic 2. (Asynchronous) for IVINotification//IVICorrection Other priority codes cannot be used in this message service.
4	SupportedResponseVersion	0-1	Enum	Denotes the maximum message version of the IVIResponse message supported by the client application. Must be a known version. Only mandatory for IVIRetrieve en IVIRetrievePublic
4	***RecipientMemberStates***	0		Is filled by EUCARIS system, do not use this field.
2	***Body***	1		The body section contains one request message, including message metadata.
3	***Messages***	1		

NestingLevel	Item	Occ	Type	Remarks
4	(type)	1	Text	The name of the message type. Must match with the message service declaration. Possible values: • 'RequestByVin' for IVIRetrieve/IVIRetrievePublic • 'IVINotification' for 'IVINotification'' • 'IVICorrectionNotification
4	(version)	1	Enum	Must be a known version. Refer to 3.3.2 for known versions.
4	***Message***	1		Only one occurrence allowed for this message service.
5	MessageId	0		***Is assigned by EUCARIS***. A client application shall not populate this item.
5	ExternalMessageId	1	Text	The MessageId assigned by the client application. Either use a UUID, at least version 4, or a reference unique to the initiator of the workflow. This id will be returned in the response message as *ReferenceExternalMessageId*.
5	ReferenceMessageId	0		Not applicable.
5	ReferenceExternalMessageId	0		Not applicable.
5	ReplyingMemberStateCode	0		Not applicable.
5	***Content***	1		In this node, provide the actual message.

3.5 Responding side envelope

When EUCARIS sends a request message to a legacy system, the envelope information is copied from the envelope provided by the client application that initiated the workflow. The following items are added by EUCARIS:

- WorkflowId
- InitiatingParticipantName
- MessageId

Note: The *PriorityCode* in the ***Info*** section denotes the type of processing expected by the client application (in this case two, asynchronous processing), but this is *not the type of processing* expected by the legacy system itself. A single case legacy system shall operate synchronously.
Note 2: A single case legacy system may receive request envelopes where PriorityCode = 1 is populated but also request envelopes where PriorityCode =2 is populated. It is expected to accept and process both variants, synchronously.
Note 3: Regardless of *PriorityCode*, all requests sent to a single case legacy system, will contain only one occurrence of ***Message***.

IVI messages are contained within the EUCARIS envelope, of which the message specifications are described in [DOC-5]. This chapter describes how a legacy system should populate the envelope items when submitting an IVI *Response* to EUCARIS

Nesting Level	Item	Occ	Type	Remarks
1	***EucarisEnvelope***			
2	(version)	1	Enum	1.0
2	***Header***	1		The header section contains routing info.
3	RecipientMemberStateCode	1	Enum	SenderMemberStateCode from the request– coding system ISO 3166-1 alpha-2
3	SenderMemberStateCode	1	Enum	Member state providing the response - coding system ISO 3166-1 alpha-2
2	***Workflow***	1		The workflow section contains the metadata of the workflow.
3	WorkflowId	1	UUID	Contains *WorkflowId* provided by EUCARIS in the request message. ***Mandatory to provide.***
3	***Info***	0		This section is provided by EUCARIS in the request message. ***Shall not be echoed in the response message***.
2	***Body***	1		The body section contains the response message.
3	***Messages***	1-n		
4	(type)	1	Text	The name of the message type. Must match with the message service associated with the workflow. Possible value 'IVIResponse'
4	(version)	1	Enum	Denotes the version of the response message, supported by the legacy system. Must be a known version. Refer to 3.3.2 for known versions.
4	***Message***	1		One occurrence
5	MessageId	0		***Is assigned by EUCARIS***. A legacy system shall not populate this item.
5	ExternalMessageId	1	UUID	The MessageId assigned by the legacy system. Use a UUID, at least version 4.
5	ReferenceMessageId	1		Contains *MessageId* of the corresponding request. ***Mandatory to provide.***

Nesting Level	Item	Occ	Type	Remarks
5	ReferenceExternalMessageId	0		***Is assigned by EUCARIS***. A legacy system shall not populate this item.
5	ReplyingMemberStateCode	0		***Is assigned by EUCARIS***. A legacy system shall not populate this item.
5	***Content***	1		In this node, provide the actual response.

4. Retrieve IVI

4.1 Goal

Based on the Vehicle Identification Number, retrieve the initial vehicle information. This can be done either by denoting a specific member state, or by searching for the initial vehicle information in all connected member states.

4.2 Requesting side requirements

4.2.1 Flow Description

The trigger to start a IVIRetrieve workflow is a request message coming from a certain sender Member States' client application (EUCARIS web client or customized client). The sending of requests and processing of responses is conducted in a synchronous session, i.e., the time out is such that a user behind the client application can fire a request and wait for the response (e.g., 10 seconds). The workflow processing by EUCARIS is described in [DOC-6].

4.2.2 Search criteria

To search for an IVI, the following data is given in the request message:

- VehicleIdentificationNumber (VIN)

Note: In the envelop the recipient country or MCI can be added.

4.2.3 Broadcast

Besides sending a request to one specific Member State, it is possible to broadcast a request to all members of the network. To specify a broadcast search, use an artificial Member State code for the recipient of the request ('MCI'). For the retrieval service, the broadcast executed by EUCARIS, is of type 'Regular.' For further details, refer to [DOC-6].

Since EUCARIS will receive a consolidated response from all Member States connected to the network, and since EUCARIS must log this response, it must know from what Member States a response can be expected. So, EUCARIS does determine what Member States are connected to the IVI network. All these Member States are recorded in the workflow as 'reacting' participant.

A broadcast may or may not include the Member State that sent the request. A Member State can choose if it is possible to send IVI requests to the home country, it is default 'Enabled.' If enabled, a broadcast will also include the home country. If disabled, a broadcast will not be sent to the home country.

4.2.4 Basic flow

The trigger to start IVIRequestByVin workflow is a request message coming from a certain sender Member States' client application (EUCARIS web client or customized client).

The sending of requests and processing of responses is conducted in a synchronous session, i.e., the time out is such that a user behind the client application can fire a request and wait for the response (e.g., 10 seconds).

The workflow processing by EUCARIS is described in [DOC-6].

4.3 Responding side requirements

4.3.1 Flow description

The trigger to start this flow is a (single) request message coming from the Sending MS. Processing of the workflow by EUCARIS is described in [DOC-6]. Refer to the **basic flow**.

4.3.2 Processing a search

A Member State returns all IVI's submitted by manufacturers, matching the search criteria (for vehicles manufactured in a multi-stage process, there may be more than one IVI). However, if in a IVI database, multiple copies of the same IVI exist, i.e. more than one IVI occurrence for one unique combination of VehicleIdentificationNumber + TypeApprovalNumber, then a Member State shall only return the occurrence most recently submitted, and ignore previous occurrences (this because there may have been corrections).

4.3.3 Consolidated response

The result of a broadcast request is a consolidated response, i.e., one response envelope, containing multiple response messages (multiple occurrences of ***Message***), one response message from each Member State (the envelope item *ReplyingMemberStateCode* indicates the sender of a response). Normally, the individual Member State response is a *IVIResponse* message, but if an error occurred (Member State is unavailable, time out has occurred, etc.) the response is an *ErrorNotification* message. A consolidated response, therefore, can be a mix of regular response messages and error notification messages.

Since member states can return the same IVI's logic is added to filter the responses, so member states will not receive redundant information. A new broadcasttype is created to arrange this logic, the SmartResponseSelection.

4.4 IVIRetrieve

A IVIRetrieve consists of the following message dialogue:

- Request message IVIRequestByVin
- Response message IVIResponse

4.4.1 IVIRequestByVin

Nesting Level	Item	Occ	Type	Remarks
1	***RequestByVin***	1		
2	***VehicleSearchData***	1		
3	VehicleIdentificationNumber	1	Text	

4.4.2 IVIResponse

Nesting Level	Item	Occ	Type	Remarks
1	***IVIResponse***	1		
2	***IVIReplies***	0-1	Choice	Or IVIReplies are given or InformationMessages
3	***IVIReply***	1-n		For multistage vehicles there might be more than one dataset(reply)
4	RespondingAuthority	0-1	Text	
4	***InitialVehicleInformationV1***	0-1	Choice	Or InitialVehicleInformationV1 or InitialVehicleInformationV2 is given as reply. Contains the complete initial vehicle information message, as has been defined by an EReg/TAAM working group[1] of 1.x version. For the xsd see WWW-1]
5	***Header***	1		
6	IVIReferenceId	1		
6	VersionNumberXsd	0-1		
5	***Body***	0-1		
6	***CocDataGroup***	1		See section 8.1
6	***Signature***	0-1		
4	***InitialVehicleInformationV2***	0-1	Choice	Contains the complete initial vehicle information message, as has been defined by an EReg/TAAM working group of 2.x version. For the xsd see WWW-1]
5	***Header***	1		
6	IviReferenceId	1		
6	IviVersionNumberXsd	1		
6	IviVersionNumber	1		
6	IviVersionDateTime	1		
6	IntendedCountryRegistration	0-1		
6	DesignatedTypeApprovalCountry	1		
5	***CocDataGroup***	1		See section 8.1
5	***Signature***	1		For V2 the signature is mandatory

[1] The XSD of this part of the message is defined and maintained by an EReg/TAAM working group. EUCARIS includes this XSD in its retrieval service message. See also [WWW-1].

Nesting Level	Item	Occ	Type	Remarks
2	***InformationResponseMessages***	0-1	Choice	
3	***InformationResponseMessage***	1-n		
4	InformationResponseMessageCode	1	Enum	
4	InformationResponseMessageDesc	1	Text	
4	InformationResponseMessageVariable	0-1	Text	

5. RetrievePublic IVI

5.1 Goal

Based on the Vehicle Identification Number, retrieve the initial vehicle. This can be done either by denoting a specific member state, or search for the initial vehicle information in all connected member states.

This service is separated from Retrieve IVI since the RetrievePublic can be used by citizens or companies via a website and has a potential risk of misuse. The main reason for a separate service is the possibility of blocking the service in case of misuse.

5.2 Requesting side requirements

5.2.1 Flow Description

The trigger to start a IVIRetrievePublic workflow is a request message coming from a website made by a citizen or company.

The sending of requests and processing of responses is conducted in a synchronous session, i.e., the time out is such that a user behind the client application can fire a request and wait for the response (e.g., 10 seconds). The workflow processing by EUCARIS is described in [DOC-6].

For further specification see chapter 4.

6. IVINotification

6.1 Goal

If a certain Member State, hosting an accesspoint, a initial or corrected IVI from a manufacturer is received, the IVI is sent to the involved member states which are the type approval authority and intended country registration.

Possible results

The following results are possible:

1. The notification has been rejected (because of invalid format, receiving MS unknown, not connected, no rights to send notification).
2. The notification has been sent to the Member States
    a. Via the upload queue (receiving MS <> sending MS)
    b. Via the download queue (receiving MS = sending MS)

6.2 Requesting side requirements

6.2.1 Flow Description

The trigger to start a IVINotification workflow is a notification message coming from a certain sender Member States' client application (EUCARIS web client or customized client or accesspoint). The sending of notification and processing of Acknowledgement or ErrorNotification is conducted in an asynchronous process.

The notification is transferred asynchronously, i.e., the message is sent via a queue mechanism, and at the receiving Member State the message is made retrievable for a domestic application (EUCARIS Web Client or a custom application) for presenting it to an end user and process it, e.g. reply to it.

The workflow processing by EUCARIS is described in [DOC-6].

6.2.2 Broadcast

Besides sending a request to one specific Member State, it is possible to broadcast a request to all members of the network. To specify a broadcast search, use an artificial Member State code for the recipient of the request ('MCI'). For the IVINotification a regular broadcast is executed. If the IVINotification doesn't have RecipientMemberStates present and the MessageService has the MessageServiceParameters of type 'Subscriber' and 'Xpath' available, EUCARIS will add Subscribers, TypeApprovalAuthority and Intended Market Member State ISO 3166-1 alpha-2 codes to the IVINotification recipients. For further details, refer to [DOC-6].

Since EUCARIS will receive a consolidated response from all Member States connected to the network, and since EUCARIS must log this response, it must know from what Member

States a response can be expected. So, EUCARIS does determine what Member States are connected to the IVI network. All these Member States are recorded in the workflow as 'reacting' participant.

A broadcast may or may not include the Member State that sent the request. A Member State can choose if it is possible to send IVI requests to the home country, it is default 'Enabled.' If enabled, a broadcast will also include the home country. If disabled, a broadcast will not be sent to the home country.

6.3 Responding side requirements

6.3.1 Acknowledgement

When a Member State receives a notification message, EUCARIS sends an acknowledgement message, consisting of a response envelope with the *WorkflowId* and the workflow info section.
In the logging, the acknowledgement message is recorded as acceptance result 'OK' (to the activity of sending the secure message). Refer to [DOC-6] for processing details.

6.4 IVINotification

A IVINotification consists of one messagetype:
- IVINotification

6.4.1 IVINotification

Nesting Level	Item	Occ	Type	Remarks
1	***IVINotification***	1		
2	***InitialVehicleInformationV1***	0-1	Choice	Or InitialVehicleInformationV1 or InitialVehicleInformationV2 is given as reply. Contains the complete initial vehicle information message, as has been defined by an EReg/TAAM working group2 of 1.x version. For the xsd see WWW-1].
3	***Header***	1		
4	IVIReferenceId	1		
4	VersionNumberXsd	0-1		
3	***Body***	0-1		
4	***CocDataGroup***	1		See section 8.1
3	***Signature***	0-1		
2	***InitialVehicleInformationV2***	0-1	Choice	Contains the complete initial vehicle information message, as has been

[2] The XSD of this part of the message is defined and maintained by an EReg/TAAM working group. EUCARIS includes this XSD in its retrieval service message. See also [WWW-1].

Nesting Level	Item	Occ	Type	Remarks
				defined by an EReg/TAAM working group of 2.x version. For the xsd see WWW-1].
3	***Header***	1		
4	IviReferenceId	1		
4	IviVersionNumberXsd	1		
4	IviVersionNumber	1		
4	IviVersionDateTime	1		
4	IntendedCountryRegistration	0-1		
4	DesignatedTypeApprovalCountry	1		
3	***CocDataGroup***	1		See section 8.1
3	***Signature***	1		For V2 the signature is mandatory

7. IVICorrection

7.1 Goal

If a certain Member State, hosting an accesspoint, a corrected IVI from a manufacturer is received, a correction notification is sent to all Member States. The reason to send it to all Member States is that the manufacturer does not know where the vehicle is registered. The message is an alert to Member States that used the previous version of the IVI (which contains errors) and may result in this Member State taking action (e.g., retrieve the corrected IVI to compare it with the previous one).

The Member State that sends the correction notification, sends it to all connected Member States as MCI.

Possible results
The following results are possible:

1. The notification has been rejected (because of invalid format, receiving MS unknown, not connected, no rights to send notification).
2. The notification has been sent to all connected Member States and is available in the download queue of reacting member state.

7.2 Requesting side requirements

7.2.1 Flow Description

The trigger to start a IVICorrection workflow is a notification message coming from a certain sender Member States' client application (EUCARIS web client or customized client or accesspoint). The sending of notification and processing of Acknowledgement or ErrorNotification is conducted in an asynchronous process.

The notification is transferred asynchronously, i.e. the message is sent via a queue mechanism, and at the receiving Member State the message is made retrievable for a domestic application (EUCARIS Web Client or a custom application) for presenting it to an end user and process it, e.g. reply to it.

The workflow processing by EUCARIS is described in [DOC-6].

7.2.2 Broadcast

The notification is always broadcasted to all connected Member States. To specify a broadcast, use an artificial Member State code for the recipient of the request ('MCI'). The broadcast executed by EUCARIS, is of type 'Regular.' For further details, refer to [DOC-6].

A broadcast may or may not include the Member State that sent the request. A Member State can choose if it is possible to send IVI requests to the home country. If enabled, a broadcast will also include the home country. If disabled, a broadcast will not be sent to the home country.

7.3 Responding side requirements

7.3.1 Acknowledgement

When a Member State receives a notification message, EUCARIS sends an acknowledgement message, consisting of a response envelope with the *WorkflowId* and the workflow info section.
In the logging, the acknowledgement message is recorded as acceptance result 'OK' (to the activity of sending the notification). Refer to [DOC-6] for processing details.

7.4 IVICorrection

A IVICorrection flow consists of one messagetype:

- IVICorrectionNotification

7.4.1 IVICorrectionNotification

Nesting Level	Item	Occ	Type	Remarks
1	***IVICorrectionNotification***	1		
2	DesignatedTypeApprovalCountry	0-1	Enum	Involved country, use the definition of IVI2
2	IntendedCountryRegistration	0-1	Enum	Involved country, use the definition of IVI2
2	VehicleIdentificationNumber	1	Text	

8. Annex A – Nodes and elements

In Alphabetical order this annex describes in detail all the nodes and elements used in the messages. The following information is provided:

- Item
  The name of the XML node or element (see also 8.1)
- Type
  The data type, which only applies to XML elements and not to XML nodes. See also 8.1.
- Len
  This column indicates the length of the element.
  - 'n' indicates a fixed length where 'n' is the number of characters.
  - 'm-n' indicates a variable length where "m" is the minimum and "n" is the maximum.
- Description
  Information about the purpose of the node or element, rules for usage and examples of usage. For elements of type "Enum," i.e., elements with a fixed set of values, in the description the possible values will be listed.

8.1 CoC data group

The CoC datagroup of the IVI message was designed by an EReg-TAAM working group. The message book of this datagroup is available at [WWW-1].
There are two version available of the message book:
Message book: 1.10.
Message book: 2.0.

Version 2.0 is not compatible with the 1.x version.

8.2 General message elements

This section gives the use and meaning of the message elements outside the CocDataGroup.

Item	Type	Len	Unity	Description
Header				The header is used to control the process flow. The header is sent with each reply
IVICorrectionNotification				This node contains the inform information.
InformationResponseMessage				See Annex B.
InformationResponseMessageCode	Enum			See Annex B.
InformationResponseMessageDesc	Text	1-80		See Annex B.
InformationResponseMessages				This node is used when one individual information request is unsuccessful, i.e., does not yield information. For more details see Annex B.

Item	Type	Len	Unity	Description
InformationResponseMessageVariable	Text	1-240	See Annex B.	
InitialVehicleInformationV1				This group contains all data of V1.x included in the dataset defined by an eREG/TAAM working group, for the electronic delivery of IVI data to IVI databases. The data group contains the complete, unaltered XSD. The dataset consists of the following data groups: *CocDataGroup* *TechnicalAdditionalDataGroup* *NationalDataGroup*
InitialVehicleInformationV2				This group contains all data of V2.x included in the dataset defined by an EReg/TAAM working group, for the electronic delivery of IVI data to IVI databases. The data group contains the complete, unaltered XSD. The dataset consists of the following data group(s): *CocDataGroup* ~~*TechnicalAdditionalDataGroup*~~ ~~*NationalDataGroup*~~
IVIReferenceId	UUID	36		Unique identifier of the IVI Dataset.
IVIReply				This node lists the result of one initial vehicle information retrieval, i.e., the result of the query to one database.
IVIReplies				This node lists the complete result of an initial vehicle information retrieval.
IVINotification				This node contains the IVI notification including the coc data.
IVIResponse				This node contains the IVI information (coc data)
RespondingAuthority	Text	1-80		Name of responding organisation
IVIRequestByVin				This node contains a complete request *IVIRequestByVin*.
ServiceExecutionReasonCode	Enum			Is used in combination with *ServiceExecutionReasonDesc*. Value list

<table>
<tr><th>Item</th><th>Type</th><th>Len</th><th>Unity</th><th>Description</th></tr>
<tr><td></td><td></td><td></td><td></td><td>
<table>
<tr><th>Code</th><th>Matching description</th></tr>
<tr><td>0</td><td>Not specified (old situation)</td></tr>
<tr><td>2</td><td>(Vehicle) Import</td></tr>
<tr><td>4</td><td>Inform / Notify / Legal obligation to inform or notify a competent authority</td></tr>
<tr><td>6</td><td>Application for vehicle registration</td></tr>
<tr><td>13</td><td>Inform the public / a client / a citizen</td></tr>
</table>
For maintenance and testing purpose
3 = Composing statistics
5 = Test
</td></tr>
<tr><td>Signature</td><td>Module</td><td></td><td></td><td>E-Idas seal
https://digital-strategy.ec.europa.eu/en/policies/discover-eidas
Format of an eIDAS Seal
An eIDAS seal typically includes:
1. Organization's Name: The name of the organization using the seal.
2. Seal Image: A unique graphic image representing the organization.
3. Timestamp: The date and time when the document were sealed.
4. Digital Certificate Information: Details about the certificate used to create the seal, including the issuing authority and validity period.
Example:
Organization: Example Corp
Seal Image: [Graphic Seal]
Timestamp: 27 November 2024, 13:18
Certificate: Issued by Example CA, Valid until 27 November 2026</td></tr>
<tr><td>VehicleSearchData</td><td></td><td></td><td></td><td>Node indication how the information can be searched</td></tr>
</table>

9. Annex B – Defined control messages

This chapter outlines what control messages can be given to manage functional error situations. For technical error handling and error notifications, refer to [DOC-5].
It is possible to give more than one control message to clarify (error) situations. For all control messages, the element MessageVariable can be used for further explanation. It is recommended to use the English language.

The following types of error messages are distinguished:

Message name	Kind of message/Situation	Examples
InformationResponseMessage	Error message concerning one individual information response that could not be processed	No information found

In the following situations, it is determined by EUCARIS:

- Request message is invalid (*InvalidFormat*)
- Retrieval tried for a country that is not connected (*NotYetConnected*).

In those cases, the request will not be passed through, and the response is provided by EUCARIS.

9.1 Control messages to manage unsuccessful inquiries

These messages are put in ***InformationResponseMessages.*** A message contains the following elements:
InformationResponseMessageCode
InformationResponseMessageDesc
InformationResponseMessageVariable

The following messages are available. One or more messages can be used for explanation. InformationResponseMessageVariable might be used to give additional details.

MessageCode	MessageDesc	MessageVariable
101	No information found	
102	Input not correct	
104	Timeout occurred	
508	An unexpected error has occurred	

9.2 Best practices

Best practices to manage common error situations:

Error situation	Message to use	Remarks/MessageVariable
No hits	101	
IVI database does not respond in time	104	
Retrieval results in a technical error	508	
The IVI data are not digitally available	3	Authorisation error, this message will be given by EUCARIS
Request message invalid	102	Input is not correct; this message will be given by EUCARIS
An error occurs for an unknown reason	508	The MessageVariable is used to provide the error thas was returned.

10. Annex C – XML message specs conventions

10.1 Used conventions.

The tables used to describe the XML messages provide the following information:
- NestingLevel
- Item
- (Optional) Version
- Occ (occurrence)
- Type
- Remarks

10.1.1 Nesting level

Describes how the XML nodes and elements are nested in the message.

10.1.2 Item

The following items are distinguished:
- An ***XML node*** is indicated in bold & italic. Its name is denoted in PascalCase.
- An XML element is indicated by a normal appearance. Its name is denoted in PascalCase.
- An (xml attribute) is indicated between brackets. Its name is denoted in lowercase.

In Annex A, for every node and element, its functional definition and its use is described.

10.1.3 Version

This column is only present if more than one version of a message exists. Denotes the first version in which the node, element or attribute is part of the message. The item is present in all versions since the first version.

10.1.4 Occ

Value	Description
1	A mandatory item.
0-1	An optional item but if present, the item must be unique.
0-n	An optional item. When present, it may appear more than once.
1-n	A mandatory item. The item may also appear more than once

Remark:
If an optional item is absent, leave it out of the message entirely (do not send empty tags).

10.1.5 Type

Type	Description
Text	A sequence of characters. Usually, the minimum and maximum length of the sequence is specified (Annex A).
Token	The lexical and value spaces of xs:token are the sets of all the strings after whitespace replacement—i.e., after any occurrence of #x9 (tab), #xA (linefeed), and #xD (carriage return) is replaced by an occurrence of #x20 (space) and collapsing (i.e., the contiguous occurrences of spaces are replaced by a single space, and leading and trailing spaces are removed). More simply said, xs: token is the most appropriate datatype to use for strings that do not care about whitespaces.
DT	Date and Time. Can be given in UTC format (Co-ordinated Universal Time) as *'CCYY-MM-DDThh:mm: ssZ*' or *'CCYY-MM-DDThh:mm: ss±00.00*' or can be given in local time with the offset to UTC as *'CCYY-MM-DDThh:mm: ssZ±nn.nn*'. For more information see http://en.wikipedia.org/wiki/ISO_8601.
Date	Date. Can be given as a date in format *'CCYY-MM-DD*'
DateInc	Date that can be incomplete. Format *'CCYYMMDD*.' See Annex A for further information
Int	Numeric, integer values only.
Dec	Numeric, fractional numbers possible.
Boolean	An element that either has a 'true' value or a 'false' value.
Choice	Allows one and only one of the nodes or elements contained in the selected group to be present within the containing node (exclusive choice).
Enum	Enumeration: the element has a specified set of values. The possible values are described in Annex A. In XSD validation, the value of the element in the message, will be checked against the possible values.
UUID	Universally Unique Identifier, version 4. For more information see http://en.wikipedia.org/wiki/Universally_Unique_Identifier and http://en.wikipedia.org/wiki/Universally_Unique_Identifier#Implementations

10.1.6 Remarks

Contains information about situations in which a node or element applies or not. Also contains information about relations between separate elements. Note: The functional definition and the use of each node or element is described in Annex A.

11. Annex D – Country codes

Refer to [DOC-9], Annex A, for country code information.