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## eHealth platform – WG Architecture

### Hub service “getTransactionList” : functional description

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Version	Date	Description
1.0	30/07/2010	First release hub – metahub system.
1.1	25/03/2015	Review
3.0	09/02/2017	Hubservices v3

### Introduction

This document aims to provide the *functional description* of the service ‘getTransactionList’ that should be provided by each hub to its clients (hospitals, GP server, etc.).

The description is limited to functional elements: purpose, business XML messages. Pragmatic considerations such as security and WSDL descriptions are out-of-scope of this document. The description does not include the overall usage conditions that have to be implemented by the hubs (e.g. regarding the legal aspects).

This document is a part of KMEHR specification. ( <https://www.ehealth.fgov.be/standards/kmehr/> )

The document is structured as follows:

We first provide a ‘functional description’ of the service (purpose, input and output parameters independently of their XML representation ...).

We then translate this functional description into a KMEHR service (i.e. we describe the expected input and output messages)

This document does not contain any XML example. Those examples are available on the kmehr site.

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# 1 Functional description

<b>Service name</b>	getTransactionList
<b>Purpose</b>	<p>This service should be used to get the list of recorded transactions that fulfill some given criteria.</p> <p>This service should support two main search variants: one limited to the local hub, one for the overall hubs system.</p>
<b>Input parameters</b>	<ul style="list-style-type: none"> <li>- a set of criteria, including at least,             <ul style="list-style-type: none"> <li>- the identifier of the patient P,</li> </ul>             and, optionally,             <ul style="list-style-type: none"> <li>- a list of recognized transaction types T*</li> <li>- an author A</li> <li>- a time period [D-F].</li> </ul> </li> <li>- search parameters             <ul style="list-style-type: none"> <li>- the type of research (local, global, or external)</li> <li>- maximal number of allowed results (optional)</li> <li>- "break the glass" (optional)</li> </ul> </li> <li>- the sender S of the request, i.e. the healthcare party that performs the operation call</li> <li>- information about the request (id/date/time)</li> </ul>
<b>Output parameters</b>	<ul style="list-style-type: none"> <li>- the initial request</li> <li>- an acknowledge indicating the completion of the request</li> <li>- the patient as stored in the hub</li> <li>- the list of the transactions summaries that fulfill the provided criteria :             <ul style="list-style-type: none"> <li>- the transaction is related to P,</li> <li>- <b>and</b>, if the corresponding search criterion is provided in the request,                 <ul style="list-style-type: none"> <li>o the type of the transaction is contained in T*</li> <li>o <b>and</b> the authors of the transaction 'matches' with A, i.e.                     <ul style="list-style-type: none"> <li>§ A is a 'subset' of the healthcare parties describing the authors of the transaction</li> </ul> </li> <li>o <b>and</b> the medical date of the transaction is contained in the time period [D-F],</li> </ul> </li> <li>- <b>and</b> the transaction is available for S according to the 'transaction access rights'.</li> </ul> </li> </ul> <p>If the search is '<i>local</i>', the list is composed of the transactions from the local hub that fulfill the criteria. If the search is '<i>external</i>' the list is composed of the transactions from other available hubs that fulfill the criteria. If the search is '<i>global</i>' the list is composed from the transactions of all the available hubs.</p> <p>If the maximum number of allowed results is exceeded, the service returns the more recent transactions that fulfill the provided criteria.</p>

	<p>Remarks:</p> <ul style="list-style-type: none"> <li>- if one hub that needs to be contacted is not available, a warning exception will be raised and an incomplete list will be returned.</li> <li>- if there is no transaction that fulfills the provided criteria, the returned list is empty.</li> </ul>
<b>Post-condition</b>	
<b>Possible exceptions</b>	<ul style="list-style-type: none"> <li>- Technical error</li> <li>- Invalid data             <ul style="list-style-type: none"> <li>- Invalid request sender (according to the rules of the hub)</li> <li>- Invalid patient identifier</li> <li>- Invalid 'type of transaction'</li> <li>- Invalid medical author</li> </ul> </li> <li>- S is not accredited within the hub</li> <li>- S is not allowed to perform the operation according to the hub rules</li> <li>- There is no active consent for P (corresponding to the requested type of research)</li> <li>- There is no therapeutic link between S and P</li> <li>- Incomplete search (e.g. one hub is not available)</li> </ul>
<b>Comments</b>	<ul style="list-style-type: none"> <li>- <b>Identification of the patient:</b> we strongly recommend the use of the INSS number. However, at the request of some hubs, each hub may make the choice to use a local identification system for this service. Let us recall that all interhub exchanges will exclusively rely on the INSS number.</li> <li>- <b>About the "Sender":</b> the sender must at least identify the organization responsible of the caller system. For this specific operation that is a consultation operation, it should also identify the healthcare party corresponding to the end-user.</li> </ul>

## 2 Message description

### 2.1 Syntax: XSchema

<b>Operation name</b>	GetTransactionList
<b>Input data</b>	request x select
<b>Output data</b>	response x acknowledge x kmehrmessage

## 2.2 Semantics: rules and interpretation

### 2.2.1 Input data

The 'request' parameter gathers the elements relative to the information about the request (id, date, time), maximum number of allowed results, sender of the request.

The 'select' parameter gathers the elements relative to the search criteria, type of search.

Parameter	Attributes		Comments	
request	id [1]	Identification of the request within the caller system.		
	author [1]	The sender of the request represented as a sequence of <i>hparty</i> elements. It must at least contain the healthcare party corresponding to the organization responsible of the system.  For this specific operation that is a consultation operation, it should also identify the healthcare party corresponding to the end-user.	This information must be coherent with the information provided in the technical identification and authentication system (e.g. certificate).	
	date [1]	Date of request		
	time [1]	Time of request		
	maxrows [0-1]	Maximum number of results returns by the search.	If more results are found, they will be omitted.	
	breaktheglass [0-1]	Activates "break the glass" procedure	Therapeutic link is not verified, a reason must be given in field breaktheglass	
select	patient [1]	Patient concerned by the transaction.	Patient contains only the identifiers of the patient. Several identifiers of the same patient are allowed.	
	transaction [0-1]	cd [0-*	Type of the transaction	
		author [0-1]	The authors of the Document represented as a sequence of <i>hparty</i> elements	The INSS number is not required in order to identify the author because

				this information is often unknown by the sender
		begindate [0-1]		
		enddate [0-1]		
	searchtype [0-1]	Type of search : 'local', 'global' or 'external'		

### 2.2.2 Output data

The 'response' parameter gathers the elements relative to the information about the response (id, date, time), initial request, the sender of the response.

The 'acknowledge' parameter gathers the element relative to the service completion, errors or exceptions that occurred during the service execution.

The 'kmehrheader' parameter covers the patient the summaries of the transactions matching the provided criteria.

Parameter	Attributes		Comments
response	id [1]	Id of the response within the target hub	
	author [1]	Sender of the response (i.e.. the target hub)	
	date [1]	Date of response	
	time [1]	Time of response	
	request [1]	Initial request	
acknowledge	iscomplete [1]	Indicates if the execution has been successfully completed	If the conditions were fulfilled to compute a list of results – even incomplete-, iscomplete is set to 'true'; it is set to 'false' otherwise.  Exceptions may occur even if iscomplete is set to false.
	error [0-*]	Indicates the error/exception descriptions	

kmehrheader [0-1]	folder.patient [1]	Data about the patient as stored in the hub		
	folder.transaction [1-*	id [1-*	Identifier of the transaction	At least the local identifier attributed by the system owner of the transaction
		cd [1-*	Type(s) of the transaction	At least one cd from CD-TRANSACTION
		date [1]	Date of the medical transaction	
		time [1]	Time of the medical transaction	
		author [1]	The authors of the document represented as a sequence of hcparty elements	At least one hcparty must be a physical person. The hcparty are listed by granularity. The first is the most global (e.g. hospital or hub) and the last is the most specific (i.e. physical person).  If no hub is specified the transaction is supposed to come from the current hub. If the transaction comes from another hub, the first hcparty must be that hub.
		iscomplete [1]	Boolean to indicate that the document is complete	
		isvalidated [1]	Boolean to indicate that the document is valid	
		recorddatetime [1]	Date/time of the recording within the system owner of the transaction	