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API

Requirements Specification

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API Requirements Specification

Approvers:

The signatures below indicate that this document has been reviewed and **APPROVED** by the signer.

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API Requirements Specification

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API Requirements Specification

1 PURPOSE

This document details the individual requirements to be included in approved APIs.

2 SCOPE

This document contains the requirements for the approved APIs.

3 SOFTWARE SUMMARY

The following table itemizes the basic API functions:

API	Function
Status	Status API confirms the APIs are running, SQL connection and the query execution was successful. The approved database execution was successful.
Details	Provides term and SMQ detail information. Term details includes term name, code, primary and secondary SOC, currency (if an LLT), which SMQs a given term is in. SMQ information includes SMQ name, level, description, source, notes, etc.
Type	This Type API obtains the children, parents, or hierarchy of requested terms or SMQs.
Search	Performs a search based on string input and returns search results.

4 REQUIREMENT SPECIFICATION

4.1 API THROTTLING

As a software program using the approved APIs, throttling limits must be in place for each API to provide fair and even access for all API users.

4.2 AUTHENTICATION AND AUTHORIZATION

As a software program using the approved APIs, I want to be able to provide my access credentials using OpenID Connect 2.0 so that I can authenticate and use the API services.

4.3 TYPE API: TERM HIERARCHY

As a software program using the approved APIs, I want to be able to obtain the hierarchy of a requested term so that I can view the entire hierarchy for the term.

- URL must include:
 - /api/type
- Bearer token must be included in the header for authentication.
- Internal user can see "Release View", "Supplemental View" and "IMO View".
- External users who authenticate and are not approved users will receive an insufficient authorization error if they try to use this API
- External users (subscribing organizations) can only see "Release View" and "Supplemental View".
- Input is the TypeDTO request type:
- Response must return the mdhierDTO return type:

4.4 TYPE API: TERMS IN SMQs

As a software program using the APIs, I want to be able to obtain the SMQs of a requested term so that I can view the SMQs in which the term appears.

- URL must include:
 - /api/type
- External users who authenticate and are not users will receive an insufficient authorization error if they try to use this API.
- Bearer token must be included in the header for authentication.
- Only available in release view.
- Input is the TypeDTO request type for the main SMQ record(s):
- Response must return the smqtDTO return type:
- The child records will include smqtDTO response types for the child PT/LLT records:

4.5 TYPE API: TERM HIERARCHY

As a software program using the APIs, I want to be able to obtain the hierarchy of all child terms of requested term and requested term so that I can view the entire hierarchy for the terms. For rtype = F and bview = SOC.

- URL must include:

- /api/type
- Bearer token must be included in the header for authentication.
- Internal user can see "Release View", "Supplemental View" and "IMO View".
- External users who authenticate and are not users will receive an insufficient authorization error if they try to use this API.
- External users (subscribing organizations) can only see "Release View" and "Supplemental View".
- Input is the TypeDTO request type:
 - Response must return the mdhierDTO return type:

4.6 TYPE API: CHILDREN OF SOC

As a software program using the APIs, I want to be able to obtain the children of a requested SOC by supplying a SOC code so that I can determine the child HLGT details defined in the response model under the SOC.

- URL must include:
 - /api/type
- Bearer token must be included in the header for authentication.
- Internal user can see "Release View", "Supplemental View" and "IMO View".
- External users who authenticate and are not approved users will receive an insufficient authorization error if they try to use this API.
- External users (subscribing organizations) can only see "Release View" and "Supplemental View".
- Input is the TypeDTO request type:
- Response must return the hlgtDTO return type:

4.7 TYPE API: CHILDREN OF HLGT

As a software program using the APIs, I want to be able to obtain the children of a requested HLGT by supplying a HLGT code so that I can determine the child HLT records under the HLGT.

- URL must include:
 - /api/type
- Bearer token must be included in the header for authentication.
- Internal user can see "Release View", "Supplemental View" and "IMO View".
- External users who authenticate and are not approved users will receive an insufficient authorization error if they try to use this API.
- External users (subscribing organizations) can only see "Release View" and "Supplemental View".
- Input is the TypeDTO request type:
- Response must return the hltDTO return type:

4.8 TYPE API: CHILDREN OF HLT

As a software program using the APIs, I want to be able to obtain the children of a requested HLT by supplying a HLT code so that I can determine the child PT records under the HLT.

- URL must include:
 - /api/type
- Bearer token must be included in the header for authentication.

- Internal user can see "Release View", "Supplemental View" and "IMO View".
- External users who authenticate and are not approved users will receive an insufficient authorization error if they try to use this API.
- External users (subscribing organizations) can only see "Release View" and "Supplemental View".
- Input is the TypeDTO request type:
- Response must return the ptDTO return type:

4.9 TYPE API: CHILDREN OF PT

As a software program using the approved APIs, I want to be able to obtain the children of a requested PT by supplying a PT code so that I can determine the child LLT records under the PT.

- URL must include:
 - /api/type
- Bearer token must be included in the header for authentication.
- External users who authenticate and are not approved users will receive an insufficient authorization error if they try to use this API.
- Where bview = 'SOC'
 - Internal user can see "Release View", "Supplemental View" and "IMO View".
 - External user (subscribing organization) can see "Release View" and Supplemental View"
- Where bview = 'SMQ'
 - For both an internal or external (subscribing organization) user, only the "Release View" is available.
- Input is the TypeDTO request type:
- Response must return the lltDTO return type:

4.10 TYPE API: CHILDREN OF LLT JAPANESE

As a software program using the approved APIs, I want to be able to obtain the children of a requested LLT by supplying a LLT code so that I can determine the child synonym records under the LLT in Japanese.

- URL must include:
 - /api/type
- Bearer token must be included in the header for authentication.
- External users who authenticate and are not approved users will receive an insufficient authorization error if they try to use this API.
- Only available in the Release View.
- Input is the TypeDTO request type:
- Response must return the syndDTO return type:
- If there is no Japanese synonym for a child LLT there will be an invalid response.

4.11 TYPE API: CHILDREN OF SMQ

As a software program using the approved APIs, I want to be able to obtain the children of a requested SMQ by supplying a SMQ code so that I can determine the child records under the SMQ.

- URL must include:
 - /api/type
- Bearer token must be included in the header for authentication.
- External users who authenticate and are not approved users will receive an insufficient authorization error if they try to use this API.
- Only available in "Release View".
- Input is the TypeDTO request type:
 - Response must return the smqDTO return type:
 - Response must include nested ptDTO response type:
 - Response must include nested lltvDTO response type:
 - The child records will include smqDTO response type:

4.12 TYPE API: PARENTS OF LLT

As a software program using the approved APIs, I want to be able to obtain the parents of a requested LLT by supplying a LLT code so that I can determine the parent PT records of the LLT.

- URL must include:
 - /api/type
- Bearer token must be included in the header for authentication.
- Internal user can see "Release View", "Supplemental View" and "IMO View".
- External users who authenticate and are not approved users will receive an insufficient authorization error if they try to use this API.
- HLT External users (subscribing organizations) can only see "Release View" and "Supplemental View".
- Input is the TypeDTO request type:
- Response must return the ptDTO return type:

4.13 TYPE API: PARENTS OF PT

As a software program using the approved APIs, I want to be able to obtain the parents of a requested PT by supplying a PT code so that I can determine the parent HLT records for the PT.

- URL must include:
 - /api/type
- Bearer token must be included in the header for authentication.
- Internal user can see "Release View", "Supplemental View" and "IMO View".
- External users who authenticate and are not approved users will receive an insufficient authorization error if they try to use this API.
- External users (subscribing organizations) can only see "Release View" and "Supplemental View".
- Input is the TypeDTO request type:
- Response must return the hltDTO return type:

4.14 TYPE API: PARENTS OF

As a software program using the approved APIs, I want to be able to obtain the parents of a requested HLT by supplying a HLT code so that I can determine the parent HLGT records of the HLT.

- URL must include:
 - /api/type
- Bearer token must be included in the header for authentication.
- Internal user can see "Release View", "Supplemental View" and "IMO View".
- External users who authenticate and are not approved users will receive an insufficient authorization error if they try to use this API.
- External users (subscribing organizations) can only see "Release View" and "Supplemental View".
- Input is the TypeDTO request type:
- Response must return the hlgtDTO return type:

4.15 TYPE API: PARENTS OF HLGT

As a software program using the approved APIs, I want to be able to obtain the parents of a requested HLGT by supplying a HLGT code so that I can determine the parent SOC records of the HLGT.

- URL must include:
 - /api/type
- Bearer token must be included in the header for authentication.
- Internal user can see "Release View", "Supplemental View" and "IMO View".
- External users who authenticate and are not approved users will receive an insufficient authorization error if they try to use this API.
- External users (subscribing organizations) can only see "Release View" and "Supplemental View".
- Input is the TypeDTO request type:
- Response must return the SOCDTO return type:

4.16 TYPE API: PARENTS OF LLT IN SMQ

As a software program using the approved APIs, I want to be able to obtain the parents of a requested LLT in an SMQ by supplying a LLT code so that I can determine the parent PT records for the LLT in the SMQ.

- URL must include:
 - /api/type
- Bearer token must be included in the header for authentication.
- External users who authenticate and are not approved users will receive an insufficient authorization error if they try to use this API.
- Only available in Release View.
- Input is the TypeDTO request type:
 - Response must return the ptDTO return type:

4.17 TYPE API: PARENTS OF SYNONYM JAPANESE

As a software program using the approved APIs, I want to be able to obtain the parent of a requested synonym by supplying a synonym code so that I can determine the parent LLT records of the synonym in Japanese.

- URL must include:
 - /api/type
- Bearer token must be included in the header for authentication.
- External users who authenticate and are not approved users will receive an insufficient authorization error if they try to use this API.
- Only available in "Release View".
- Input is the TypeDTO request type:
- Response must return the lltDTO return type:

4.18 TYPE API: PARENT SMQS OF A PT

As a software program using the approved APIs, I want to be able to obtain the parent SMQs of a requested PT by supplying a PT code so that I can determine the parent SMQ records for the PT.

- URL must include:
 - /api/type
- Bearer token must be included in the header for authentication.
- External users who authenticate and are not approved users will receive an insufficient authorization error if they try to use this API.
- Only available in Release View.
- Input is the TypeDTO request type:
- Response must return the smqDTO return type:
- Requesting the parent of a PT that is not in any SMQ will result in a 400 Invalid Input error.

4.19 TYPE API: PARENT SMQs OF AN SMQ

As a software program using the approved APIs, I want to be able to obtain the parent SMQs of a requested SMQ by supplying a SMQ code so that I can determine the parent SMQ records for the SMQ.

- URL must include:
 - /api/type
- Bearer token must be included in the header for authentication.
- External users who authenticate and are not approved users will receive an insufficient authorization error if they try to use this API.
- Only available in Release View.
- Input is the TypeDTO request type:
- Response must return the smqDTO return type:
- Requesting the parent of a Level 1 SMQ will result in a 400 Invalid Input error since a Level 1 SMQ has no parents.

4.20 DETAILS API: DETAILS OF A REQUESTED TERM

As a software program using the APIs, I want to be able supply a term code and type (SOC/SMQ/HLGT/HLT/PT/LLT/SYN) as well as the following parameters:

- The language to return
- Whether or not to include Japanese Kana if Japanese is the requested return language
- The terminology version to use
- Whether to include results from the released terminology, or the supplemental version so that I can see the term detail information for supplied the term code.
- The version in which the term was added.
- The version in which the term was promoted.
- The version in which the term was demoted.
- The version in which the term was made non-current or current, if it is an LLT.
- Changes within the Hierarchy links for the term.
- Merged Higher-level terms.
- Change in term name.
- The version in which a PT changes the primary SOC.
- The version in which the term's placement has not changed.
- The version in which the term code was switched with another term.
- The version in which the LLT was transferred from one PT to another.

so that I can understand the historical changes to the term in the legacy data model of the terminology.

- URL must include:
 - /api/detail
- Bearer token must be included in the header for authentication.
- Internal user can see "Release View", "Supplemental View" and "IMO View".
- External users who authenticate and are not users will receive an insufficient authorization error if they try to use this API.
- External users (subscribing organizations) can only see "Release View" and "Supplemental View".
- Input is the TypeDTO request type:
 - Response must return the detailsDTO return type:
 - Response must include nested mdhierDTO return type:
 - Response must include nested treeuDTO return type:
 - Response must include nested smqDTO return type:
 - Response must include nested smqtDTO return type:

4.21 SEARCH API: SOC TERM(S)

As a software program using the APIs, I want to be able to search the terminology for specific SOC term(s) so that I can obtain the details of the SOC(s) from the terminology.

- URL must include:
 - /api/search
- Bearer token must be included in the header for authentication.
- Internal user can see "Release View", "Supplemental View" and "IMO View".
- External users (subscribing organizations) can only see "Release View" and "Supplemental View".

- External users who authenticate and are not approved users will receive an insufficient authorization error if they try to use this API.
- Input is the SearchDTO request type:
 - Request must include nested AVSearchDTO request type:
- Response must return the SearchRDTO return type:

4.22 SEARCH API: HLG T TERM(S)

As a software program using the APIs, I want to be able to search the approved terminology for specific HLG T term(s) so that I can obtain the details of the HLG Ts from the approved terminology.

- URL must include:
 - /api/search
- Bearer token must be included in the header for authentication.
- Internal user can see "Release View", "Supplemental View" and "IMO View".
- External users who authenticate and are not users will receive an insufficient authorization error if they try to use this API.
- External users (subscribing organizations) can only see "Release View" and "Supplemental View".
- Input is the SearchDTO request type:
 - Request must include nested AVSearchDTO request type:
- Response must return the SearchRDTO return type:

4.23 SEARCH API: HLT TERM(S)

As a software program using the APIs, I want to be able to search the terminology for specific HLT term(s) so that I can obtain the details of the term from the terminology.

- URL must include:
 - /api/search
- Bearer token must be included in the header for authentication.
- Internal user can see "Release View", "Supplemental View" and "IMO View".
- External users who authenticate and are not users will receive an insufficient authorization error if they try to use this API.
- External users (subscribing organizations) can only see "Release View" and "Supplemental View"
- Input is the SearchDTO request type:
 - Request must include nested AVSearchDTO request type:
- Response must return the SearchRDTO return type:

4.24 SEARCH API: PT TERM(S)

As a software program using the APIs, I want to be able to search the terminology for specific PT term(s) so that I can obtain the details of the term from the terminology.

- URL must include:
 - /api/search
- Bearer token must be included in the header for authentication.
- Internal user can see "Release View", "Supplemental View" and "IMO View".

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- External users who authenticate and are not approved users will receive an insufficient authorization error if they try to use this API.
- External users (subscribing organizations) can only see "Release View" and "Supplemental View".
- Input is the SearchDTO request type:
 - Request must include nested AVSearchDTO request type:
- Response must return the SearchRDTO return type:

4.25 SEARCH API: LLT TERM(S)

As a software program using the APIs, I want to be able to search the terminology for specific LLT term(s) so that I can obtain the details of the term from the terminology.

- URL must include:
 - /api/search
- Bearer token must be included in the header for authentication.
- Internal user can see "Release View", "Supplemental View" and "IMO View".
- External users who authenticate and are not approved users will receive an insufficient authorization error if they try to use this API.
- External users (subscribing organizations) can only see "Release View" and "Supplemental View".
- Input is the SearchDTO request type:
 - Request must include nested AVSearchDTO request type:
- Response must return the SearchRDTO return type:

4.26 SEARCH API: SMQ(S)

As a software program using the APIs, I want to be able to search the SMQs so that I can identify specific SMQs and terms in SMQs to obtain their details from the terminology.

- URL must include:
 - /api/search
- Bearer token must be included in the header for authentication.
- Internal user can see "Release View", "Supplemental View" and "IMO View".
- External users who authenticate and are not users will receive an insufficient authorization error if they try to use this API.
- External users (subscribing organizations) can only see "Release View" and "Supplemental View".
- Input is the SearchDTO request type:
 - Request must include nested AVSearchDTO request type:
- Response must return the SearchRDTO return type:

4.27 SEARCH API: TERMS AT MULTIPLE LEVELS

As a software program using the APIs, I want to be able to search the terminology for terms at multiple levels so that I can obtain the details of terms at multiple levels from the terminology.

- URL must include:
 - /api/search
- Bearer token must be included in the header for authentication.
- Internal user can see "Release View", "Supplemental View" and "IMO View".

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- External users who authenticate and are not users will receive an insufficient authorization error if they try to use this API.
- External users (subscribing organizations) can only see "Release View" and "Supplemental View".
- Input is the SearchDTO request type:
 - Request must include nested AVSearchDTO request type:
- Response must return the SearchRDTO return type:

4.28 STATUS API

As a software program using the APIs, I want to be able request the status of the APIs so that I can see if they are running.

- URL must include:
 - /api/status
- Response will include code 200 and will start with the text "API is Running", followed by a URL, followed by "SQL Connection successful. SQL Query execution successful. MDB execution successful."

5 TERMINOLOGY

Term/Acronym	Explanation
API	Application Programming Interface. An API is a set of defined rules that explain how computers or applications communicate with one another.
Formal Test Environment	A controlled computer systems environment in which formal system testing activities occurs.
HTTP	Hyper Text Transfer Protocol. The underlying protocol used by the World Wide Web. Defines how messages are formatted and transmitted, and what actions web servers and browsers should take in response to various commands.
IQ	Installation Qualification. Testing that verifies the proper installation and configuration of a computer system.
MSSO	Maintenance and Support Services Organization (MSSO).
Production Staging Environment	A controlled computer systems environment in which software is staged prior to making it available for live production use of the system for ongoing business activities.
ST	System Testing. Testing that verifies the proper operation and functionality of a computer system.

6 REFERENCES

Not applicable.