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IEDISON
INVENTION, PATENT AND
UTILIZATION (IPU)

REST API Specifications and Examples

Version 2.12

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Table of Contents

List of Figures

List of Tables

Revision History

Version	Date	Description of Change
---	09/25/2023	Modified tables, content, and reviewed for formatting and ease of use.
---	06/04/2024	Updated Section 12.4 Country List
2.4	06/10/2024	Fixed accessibility issues

2.5	07/01/2024	• Added note that some APIs will no longer be supported after July 18th, 2025.
		• Renamed attribute 'isInventionUnderFundingAgreement' to 'isExceptionCircumstanceDetermination' in invention request and invention response data object
		• Renamed attribute 'confLicenseReceiptDate' to 'confLicenseAcceptDate' in patent response data object.
		• Renamed attribute 'govtSuppClauseReceiptDate' to 'govtSuppClauseAcceptDate' in patent response data object.
		• Added 'id' attribute to invention response for 'invention', 'inventor', 'fundingAgreement', 'subContractInfo', 'explanatoryNote', and 'governmentNote' JSON objects.
		• General document cleanup and formatting
		    o Removed highlighting
		    o Fixed indentations

2.6	08/21/2024	• Search uses the Created Date as well as the Last Updated Date for the From/To Date
2.7	09/09/2024	• Updated for Utilization, Version 3 • General document cleanup and formatting

2.8	11/07/2024	• The maximum file size for the Government Support Clause (GSC) and Confirmatory License (CL) is 50MB.
		• Foreign Filings:
		    o The countryName and filingDate do not have to be unique. Users can enter Foreign Filings from the same country on the same date.
		    o When updating foreign filings, the request must contain the complete list of countries. The system will update by removing the old list and replacing it with the new list. See Table 8-3: Rules for Updating Foreign Filings Using API.

1 Scope

This document describes the prerequisites, request, and response schemas for the Invention, Patent, and Utilization (IPU) REST API implementation.

2 Prerequisites

A system account and a valid PKI certificate issued by an authorized certificate issuer are required to consume the REST API services. Please contact the agency or organization administrator for a system account setup and a PKI certificate.

New System Account Requirements for Agency or Organization:

- ISA Document: Download a template from iEdison, sign and upload during the system account request process.
- PKI Certificate: Acquire a certificate before requesting a system account and upload during the system account request process.

Note: iEdison will only accept certificate validity no longer than two years.

The following are authorized certificate issuers.

Certificate Issuer	Expiration Date
DigiCert EV RSA CA G2	07/02/2030
DIGICERT SHA2 ASSURED ID CA	11/08/2028
DIGICERT SHA2 ASSURED ID CA	11/05/2028
DIGICERT SHA2 EXTENDED VALIDATION SERVER CA	10/27/2028
DIGICERT SHA2 HIGH ASSURANCE SERVER CA	10/22/2028
DIGICERT SHA2 HIGH ASSURANCE SERVER CA	10/22/2028
DIGICERT TLS RSA SHA256 2020 CA1	04/13/2031
ENTRUST CERTIFICATION AUTHORITY – L1K	12/05/2030
Entrust DV TLS Issuing RSA CA 1	08/22/2027
Entrust EV TLS Issuing RSA CA 1	08/22/2027
Entrust OV TLS Issuing RSA CA 1	08/22/2027
Entrust DV TLS Issuing RSA CA 2	12/10/2027
Entrust EV TLS Issuing RSA CA 2	12/10/2027
Entrust OV TLS Issuing RSA CA 2	12/10/2027
GO DADDY SECURE CERTIFICATE AUTHORITY – G2	05/03/2031
GO DADDY SECURE CERTIFICATION AUTHORITY	11/15/2026
HydrantID Server CA O1	12/12/2029
INCOMMON RSA SERVER CA	09/09/2024
INCOMMON RSA SERVER CA 2	11/15/2032
SECTIGO RSA ORGANIZATION VALIDATION SECURE SERVER CA	12/31/2030

Table 2-1: Certificate Issuers List

3   Abbreviations

Acronym	Description
API	Application Programming Interface
HTTP	Hypertext Transfer Protocol
IPU	Invention, Patent, and Utilization
JSON	JavaScript Object Notation
PKI	Public Key Infrastructure
REST	Representational state transfer
URI	Uniform Resource Identifier

Table 3-1: List of Abbreviations

4   PKI Authentication

REST API endpoint requests initiated by API consumers are authenticated by Mutual TLS authentication. An iEdison API consumer's client system must present a client PKI certificate issued by a trusted issuer as listed above in Section 2.0.

iEdison will retrieve and verify the serial number, issuer, and validity of the client certificate in the context of the request against the system user records in the database. The serial number and issuer's Common Name (CN) combination is used to uniquely identify a system user.

- The PKI client certificate and the TLS 1.2 protocol are used together for authentication to consume iEdison REST API services.
- All data is encrypted with TLS certificates across the network.
- The digital signature in the PKI certificate associated with the API consumer data provides evidence to the REST API Services for authentication.
- The server authenticates the client user's identity based on the PKI certificate provided by the API consumer.

5   Authorization

Each system account is identified by the combination of the Serial Number and Issuer's Common Name (CN) from the PKI certificate. The system account is associated with an organization/institution record which is used to control what data can be accessed and modified. The iEdison REST API provides endpoints for retrieving information about Invention, Patent, and Utilization records of an organization or agency. Documentation about the REST API services can be found in this document.

6   Environment and URI

- **User Acceptance Testing (UAT)**

  URI: https://**api-iedisonuat.nist.gov**/iedison/api/{version}/{resourcetype}/{action}
  version   :   [v1, v2, v3]
  resourcetype   :   [inventions, patents, utilizations, documents, notifications]
  action   :   [create, update, search]

- **Production**

  URI: https://**api-iedison.nist.gov**/iedison/api/{version}/{resourcetype}/{action}
  version   :   [v1, v2, v3]
  resourcetype   :   [inventions, patents, utilizations, documents, notifications]
  action   :   [create, update, search]

* Notes: Each of the resource types has its own versioning incremental.

6.1   Specification File

To view the full details of this API in the specification file (the file generated by Swagger), click on the links below.

- **User Acceptance Testing (UAT)**

  URI: https://api-iedisonuat.nist.gov/iedison/swagger.json

- **Production**

  URI: https://api-iedison.nist.gov/iedison/swagger.json

7   Invention API Reference

The Invention API allows an organization users create, update and search for an invention record owned by the user's affiliated organization and with any agency as the Primary Agency. Agency users can create, update, and search an invention record owned by any institution and with the user's affiliated agency as Primary Agency.

The following changes were made to Version 2 (v2):

- Renamed the attribute 'isInventionUnderFundingAgreement' to 'isExceptionCircumstanceDetermination' in invention request and invention response data object
- Added 'id' attribute to the invention response for 'invention', 'inventor', 'fundingAgreement', 'subContractInfo', 'explanatoryNote', and 'governmentNote' JSON objects.

Note: Create Invention, Version 1 (v1) will no longer be supported after July 18th, 2025.

7.1   Create Invention, v2

The Create Invention API allows an organization/agency to create an Invention Report. Refer to Appendix A for samples of requests and responses.

7.1.1   Endpoint URI

This is an example of the endpoint for the Create Invention resource.

POST	/iedison/api/v2/inventions/create

7.1.2   Request Parameters

The request has the following elements:

- Headers: These are the request headers such as Accept and Content-Type. The Accept header defines the expected response format when the API returns the response. The Accept header is required for all requests.
- Body: The body contains the data that will be submitted as the POST request. When submitting a form, the format data and file content are sent in the body of the request.

The table below provides a description of the Create Invention request header and body parameters that are expected by the iEdison API.

Request Parameter	Description	Required	Data Type	Version	In
accept	Specifies the response format that is expected. Set to "application/json".	Yes	String	v1+	header
inventionRequest	The JSON object that contains attributes used in the request. Refer to the table below for a description of the attributes.	Yes	String	v1+	form-data
inventionDisclosure	Invention Disclosure document contains the written description of the Invention, a signed copy of the government Confirmatory License, and the Government Support Clause which is in a Patent or Patent application. The following file types are allowed for the Invention Disclosure document: CSV, GIF, JPEG, JPG, PNG, PDF, DOCX, DOC, TIFF, TIF, TXT, XLS, XLSX, PPT, PPTX, ODT, and RTF. The maximum file size is 50MB.	Yes	Binary Attachment	v1+	form-data

Table 7-1: Create Invention Request Parameters

The table below lists the attributes that will be included in the **inventionRequest** parameter when creating an Invention Report. The attributes are included in the JSON object as part of the **inventionRequest** form-data text element.

JSON Attribute Name	Description	Required	Data Type	Length	Version
granteeOrganizationName	The name of the organization established at registration. This field is no longer used in the request. The system is using the institutionCode instead. If value is provided, the system will ignore it.	No	String	100	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
institutionCode	The unique code assigned to the reporting organizations.	Yes	String	10	v1+
dunsNumber	The Data Universal Numbering System (DUNS) number provided by Dun & Bradstreet that identifies the grantee/contractor. This field is no longer used in the request. If value is provided for this field, the system will ignore it.	No	String	9	v1+
inventionTitle	The title of the Invention as it appears in the grantee/contractors employee's Invention Report.	Yes	String	255	v1+
inventionDocketNumber	An internal reference number of the grantee/contractor organization to help track a reported Invention(s). If no value is provided for this field, the system will generate one for the invention.	No	String	30	v1+
doesNumber	The DOE S-number is assigned to each DOE Invention. The number is mainly used in DOE's Invention tracking system. This field is used by agency system users in invention create request only. If organization client submit a create invention request with this value, the system will ignore the value.	No	String	15	v1+
parentInventionNumber	Invention Report number used when an Invention is combined into another Invention as a parent Invention.	No	String	25	v1+
inventionReportDate	The date the inventor disclosed the subject Invention in writing to the recipient institution. • Format: MM/DD/YYYY	Yes	String	10	v1+
firstPublicationDate	The date of first publication, on sale, or public use initiating the one-year statutory period wherein valid Patent protection can still be obtained in the United States. • Format: MM/DD/YYYY	No	String	10	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
keywords	Any keywords used to identify or categorize your invention.	No	Array [String]	80	v1+
doeWaiver	Refers to the government's waiver of rights under 10 CFR 784 in an invention arising from DOE-funded research so that private entities may expedite commercialization, quickly bringing their technologies from lab to market. There are three types of waivers: Advance, Identified, and Class patent waivers.	No	String		v1+
institutionCodeForOtherInstitutions	The Institution Code for other organizations to view Inventions and other related parents. A maximum of three additional iEdison registered organizations may be granted view-only access to an Invention Report.	No	Array [String]		v1+
isExceptionCircumstanceDetermination	Is this invention made under a funding agreement subject to a determination of exceptional circumstances? If value is not provided, the system will set it to 'false'.	No	Boolean		v2+
Inventors	**List of Inventors** Persons considered "inventors" of this invention in the Invention Report.		**Array [JSON Object]**		**v1+**
firstName	The first name of the inventor.	Yes	String	80	v1+
lastName	The last name of the inventor.	Yes	String	80	v1+
middleInitial	The middle name or first initial of the inventor.	No	String	30	v1+
fedEmployee	Is the inventor a federal employee? • true = federal employee • false = not a federal employee (default)	No	Boolean		v1+
fedAgency	If the inventor is a federal employee, the agency the inventor works for. Click here for a list of valid abbreviations.	No	String	80	v1+
primaryAgency	The Primary Agency designated for each Invention Report in iEdison. Click here for a list of valid abbreviations.	Yes	String	50	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
bayhDoleActVersion	The Bayh Dole Act Version for the Invention. This allows 1980 or 2018. • Default = 2018	No	Integer		v1+
fundingAgreements	**The funding agreement is identified and reported in two parts, the Agency Designation (the acronym for the Federal Agency name) and the grant or contract award number corresponding to the agency that contributed to the Invention.**	**Yes**	**Array [JSON Object]**		**v1+**
agency	The federal government agency that made the award that was used to support the conception of the Invention or its first actual reduction to practice. Click here for a list of valid abbreviations.	Yes	String	80	v1+
grantNumber	The corresponding grant or contract number. The format of the grant or contract number is specified by the associated agency.	Yes	String	40	v1+
awardType	Indicates the type of award as a primary award or a sub-award. Refer to Section 12.3 for a list of valid values.	No	String	5	v1+
agreementType	Indicates the type of agreement. Refer to Section 12.1 for a list of valid values.	No	String	80	v1+
subContractInfos	**Subcontractor Information**	**No**	**Array [JSON Object]**		**v1+**
subContractNumber	An additional grant or contract number for an Invention or Patent.	Yes	String	150	v1+
contractorName	The name of the subcontractor that provided the grant or contract.	No	String	120	v1+
contractorDUNS	The DUNS number of the subcontractor that provided the grant or contract. This field had be replaced by contractorUei.	No	String	9	v1+
contractorUei	The UEI number of the subcontractor that provided the grant or contract.	No	String	12	v3+

JSON Attribute Name	Description	Required	Data Type	Length	Version
contractorCity	The city of the subcontractor that provided the grant or contract.	No	String	35	v1+
contractorState	The state of the subcontractor that provided the grant or contract. Refer to Section 12.14 for a list of valid values.	No	String	2	v1+
contractorCountry	The country name of the subcontractor that provided the grant or contract. Refer to Section 12.4 for a list of valid values.	No	String	15	v1+
inventionStatus	**Title Election and Disposition Status group**	**Yes**	**JSON Object**		**v1+**
titleElectionStatus	Organization's decision regarding the election of title for this invention. Only "Under Evaluation" or "Elect to Retain Title" is allowed in the creation invention API request.	Yes	String	80	v1+
titleElectionDate	The legally binding date that the grantee/contractor elected to retain title to an Invention. This field will be ignored by the system for Organization client since it is automatically generated when organization client submits an Invention API request with "Elect to Retain Title" Status. • Format: MM/DD/YYYY	No	String	10	v1+
notElectTitleReason	This field is for the grantee/contractor to select the reason for titleElectionStatus is 'Does Not Retain Title' in an Invention Report. Refer to Section 12.15 for a list of valid values. This field will be ignored in the create Invention API request since system only allow organization to submit a create invention API request with titleElectionStatus as "Under Evaluation" or "Elect to Retain Title".	No	String	255	v1+
notElectTitleOtherReason	If the titleElectionStatus is 'Does Not Retain Title' and notElectTitleReason is 'Other',	No	String	255	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
	this field is used to provide the description of the custom reason for not electing title. This field will be ignored in the create Invention API request since system only allow organization to submit a create invention API request with titleElectionStatus as "Under Evaluation" or "Elect to Retain Title".				
doesNotRetainTitleDate	The date the grantee/contractor chose to Not Elect Title or retain Title in an Invention Report. This field will be ignored in the create Invention API request since system only allow organization to submit a create invention API request with titleElectionStatus as "Under Evaluation" or "Elect to Retain Title". • Format: MM/DD/YYYY	No	String	10	v1+
dispositionStatus	The government's decision on the disposition of rights. This field is for agency users to update the disposition of rights. This field will be ignored in the create Invention API request.	No	String	80	v1+
dispositionRightsDate	The date the government decided on the disposition of rights. This field is for agency users to update the disposition of rights. This field will be ignored in the create Invention API request. • Format: MM/DD/YYYY	No	String	10	v1+
explanatoryNotes	**Explanatory notes are used to note information about an Invention Report or Patent Report.**	**No**	**JSON Object**		v1+
note	Explanatory notes are used to note information about an Invention Report or Patent Report. Explanatory notes should not be used for data	Yes	String	500	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
	that is provided by other iEdison data fields.				
governmentNotes	**Government Notes** This is for agency users only. If this is provided by organization client, the system will ignore it.	**No**	**JSON Object**		v1+
note	Government Notes are used to note information about an Invention Report or Patent Report by federal users who have access to view the record.	Yes	String	500	v1+
budgetIdentifiers	This contains a list of Budget Identifiers for the Invention Report.	No	Array [String]		v1+
agencyCustom1	The agency custom note field. Only available for agency users. If organization client provides a value for this field, the system will ignore it.	No	String	2000	v1+
agencyCustom2	The agency custom note field. Only available for agency users. If organization client provides a value for this field, the system will ignore it.	No	String	2000	v1+
agencyCustom3	The agency custom note field. Only available for agency users. If organization client provides a value for this field, the system will ignore it.	No	String	2000	v1+
governmentStaff	Used to identify government staff. This field will be ignored in the create Invention API request.	No	String	200	v1+
governmentCounsel	Used to identify the Government Counsel (law firm) for an Invention Report. This field will be ignored in the create Invention API request.	No	String	200	v1+

Table 7-2: inventionRequest JSON Attributes

7.1.3   Response Parameters

When the request is processed and the Invention Report is successfully created, the Create Invention API endpoint returns an **inventionResponse** data object. The attributes of this object are described in **Section 7.4**.

7.2   Update Invention, v2

The Update Invention API allows organization users to update an existing Invention Reports owned by the user's affiliated organization. Agency users can update Invention Reports with one or more funding agreements provided by the user's affiliated agency. Refer to Appendix A for samples of requests and responses.

7.2.1   Endpoint URI

This is an example of the endpoint for the Update Invention resource.

POST	/iedison/api/v2/inventions/update

7.2.2   Request Parameters

The API POST request has the following elements:

- Headers: These are the request headers such as Accept or Content-Type. The Accept header defines the expected response format when the API returns the response. The Accept header is required for all requests.
- Body: The body contains the data that will be submitted as the POST request. When submitting a form, the format data and file content are sent in the body of the request.

The table below provides a description of the Update Invention POST request header and body parameters that are expected by the iEdison API.

Request Parameter	Description	Required	Data Type	Version	In
accept	Specifies the response format that is expected. Set to "application/json".	Yes	String	v1+	header
inventionRequest	The JSON object that contains attributes used in the request. Refer to the table below for a description of the attributes.	Yes	String	v1+	form-data
inventionDisclosure	The Invention Disclosure document for updating the document in iEdison. The following file types are allowed for the Invention Disclosure document: CSV, GIF, JPEG, JPG, PNG, PDF, DOCX, DOC, TIFF, TIF, TXT, XLS, XLSX, PPT, PPTX, ODT, and RTF. The maximum file size is 50MB.	No	Binary Attachment	v1+	form-data

Table 7-3: Update Invention Request Parameters

The table below lists the attributes that will be included in the **inventionRequest** parameter when updating an invention report. The attributes are included in the JSON object as part of the **inventionRequest** form-data text element.

JSON Attribute Name	Description	Required	Data Type	Length	Version
inventionReportNumber	Automatically generated by iEdison for an Invention Report after data has been submitted, checked for errors, and verified.	Yes	String	25	v1+
granteeOrganizationName	The name of the organization established at registration. This field is no longer used in the request. The system is using the institutionCode instead. If value is provided, the system will ignore it.	No	String	100	v1+
institutionCode	The unique code is assigned to the reporting organizations.	Yes	String	10	v1+
dunsNumber	The Data Universal Numbering System (DUNS) number provided by Dun & Bradstreet that identifies the grantee/contractor. This field is no longer used in the request. If value is provided for this field, the system will ignore it.	No	String	9	v1+
inventionTitle	The title of the Invention as it appears in the grantee/contractor's employee's Invention Report.	Yes	String	255	v1+
inventionDocketNumber	An internal reference number of the grantee/contractor organization to help track a reported Invention(s). If the field is not provide or with value of empty or null, the system will keep the current value in database.	No	String	30	v1+
doesNumber	The DOE S-number is assigned to each DOE Invention. The number is mainly used in DOE's Invention tracking system. This field is used by Agency client request only. Organization client submit a request with this value will be ignored.	No	String	15	v1+
parentInventionNumber	Invention Report number used when an Invention is combined	No	String	25	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
	into another Invention as a parent Invention.				
inventionReportDate	The date that the inventor discloses the subject Invention in writing to the recipient institution. • Format: MM/DD/YYYY	Yes	String	10	v1+
firstPublicationDate	The date of first publication, on sale, or public use initiating the one-year statutory period wherein valid Patent protection can still be obtained in the United States. • Format: MM/DD/YYYY	No	String	10	v1+
inventionSubmitDate	The date when Invention is submitted to agency. • Format: MM/DD/YYYY	No	String	10	v1+
keywords	Any keywords used to identify or categorize your invention.	No	Array [String]	80	v1+
doeWaiver	Refers to the government's waiver of rights under 10 CFR 784 in an invention arising from DOE-funded research so that private entities may expedite commercialization, quickly bringing their technologies from lab to market. There are three types of waivers: Advance, Identified, and Class patent waivers.	No	String		v1+
institutionCodeForOtherInstitutions	Institution code for other organizations to view Inventions and other related parents. A maximum of three additional iEdison registered organizations may be granted view-only access to an Invention Report.	No	Array [String]		v1+
isExceptionCircumstanceDetermination	Is this invention made under a funding agreement subject to a determination of exceptional circumstances?	No	Boolean		v2+
inventors	**List of Inventors**	**Yes**	**Array [JSON Object]**		**v1+**
firstName	First name of the inventor.	Yes	String	80	v1+
lastName	Last name of the inventor.	Yes	String	80	v1+
middleInitial	Middle name or first initial of the inventor.	No	String	30	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
fedEmployee	Is the inventor a federal employee? • true = federal employee • false = not a federal employee (default)	No	Boolean		v1+
fedAgency	If the inventor is a federal employee, the agency the inventor works for. Click here for a list of valid abbreviations.	No	String	80	v1+
primaryAgency	The Primary Agency designated for each Invention Report in iEdison. Click here for a list of valid abbreviations. If organization client provides a new value for this field in the update invention request, the system will ignore it. If current primary agency user provides a new value for this field, the system will update the primary agency.	Yes	String	50	v1+
fundingAgreements	The funding agreement is identified and reported in two parts, the Agency Designation (the acronym for the Federal Agency name) and the grant or contract award number corresponding to the agency that contributed to the Invention. (See the nested JSON Object attributes below with indention)	Yes	**Array [JSON Object]**		v1+
agency	The federal government agency that made an award that was used to support the conception of the Invention or its first actual reduction to practice. Click here for a list of valid abbreviations.	Yes	String	80	v1+
grantNumber	The corresponding grant or contract number. The format of the grant or contract number is specified by the associated agency.	Yes	String	40	v1+
awardType	Indicates the type of award as a primary award or a sub-award. Refer to Section 12.3 for a list of valid values.	No	String	5	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
agreementType	Indicates the type of agreement. Refer to Section 12.1 for a list of valid values.	No	String	80	v1+
subContractInfos	**Subcontractor Information**		**Array [JSON Object]**		**v1+**
subContractNumber	An additional grant or contract number for an Invention or Patent	Yes	String	150	v1+
contractorName	The name of the subcontractor that provided the grant or contract.	No	String	120	v1+
contractorDUNS	The DUNS number of the subcontractor that provided the grant or contract.	No	String	9	v1+
contractorCity	The city of the subcontractor that provided the grant or contract.	No	String	35	v1+
contractorState	The state of the subcontractor that provided the grant or contract. Refer to Section 12.14 for a list of valid Code values.	No	String	2	v1+
contractorCountry	The country of the subcontractor that provided the grant or contract. Refer to Section 12.4 for a list of valid country Name values.	No	String	15	v1+
inventionStatus	**Title Election Status**	**No**	**JSON Object**		**v1+**
titleElectionStatus	The status of the title to rights in the reported Invention. Refer to Section 12.15 for a list of valid values.	Yes	String	80	v1+
titleElectionDate	The legally binding date that the grantee/contractor elected to retain title to an Invention. This field will be ignored by the system for Organization clients since it is automatically generated when organization clients submit an Invention API request with "Elect to Retain Title Status". If agency users submit a new date value with an update invention request, the system will update the database with the new value.	No	String	10	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
	• Format: MM/DD/YYYY				
notElectTitleReason	This field is for the grantee/contractor to select the reason for choosing to Not Elect Title where titleElectionStatus is 'Does Not Retain Title' in an Invention Report. Refer to Section 12.7 for a list of valid values. This field will be ignored by the system when titleElectionStatus is not equal to "Does Not Retain Title".	No	String	255	v1+
notElectTitleOtherReason	If the titleElectionStatus is 'Does Not Elect Title' and the notElectTitleReason is 'Other', this field is used to provide description of the custom reason for not electing title. This field will be ignored by the system when titleElectionStatus is not equal to "Does Not Retain Title" and notElectTitleReason is not equal to 'Other'.	No	String	255	v1+
doesNotRetainTitleDate	The date the grantee/contractor chose to Not Elect Title or retain Title in an Invention Report. If organization clients provide a value for this field, the system will ignore the value. If agency user provides a value for this field and the titleElectionStatus is "Does Not Retain Title", the system will update the database with the new value. • Format: MM/DD/YYYY	No	String	10	v1+
dispositionRightsDate	The date the government decided on the disposition of rights. If value is not given when dispositionStatus is selected, the system will use the system date as the value. The API provides this field is for ONLY agency users to update the disposition of rights date. If organization clients provide a value for this	No	String	10	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
	field in the update invention request, the system will ignore the value. • Format: MM/DD/YYYY				
dispositionStatus	The Invention Disposition status which is the decision of the primary agency as to how to proceed with the technology. Refer to Section 12.6 for a list of valid values. The API provides this field for ONLY the agency clients to update the disposition of rights. If organization clients provide a value for this field in the update invention request, the system will ignore the value.	No	String	255	v2+
explanatoryNotes	**Explanatory notes are used to note information about the report.**	**No**	**Array [JSON Object]**		**v1+**
note	Explanatory notes are used to note information about an Invention Report or Patent Report. Explanatory notes should not be used for data that is provided by other iEdison data fields.	Yes	String	500	v1+
governmentNotes	**Notes written by the agency regarding the report.**	**No**	**Array [JSON Object]**		**v1+**
note	Government Notes are used to note information about an Invention Report or Patent Report by federal users who have access to view the record.	Yes	String	500	v1+
budgetIdentifiers	This contains a list of Budget Identifiers for the Invention Report.	No	Array [String]		v1+
agencyCustom1	The agency custom note field. Only available for agency users. If organization client provides a value for this field, the system will ignore it.	No	String	2000	v1+
agencyCustom2	The agency custom note field. Only available for agency users. If organization client provides a value for this field, the system will ignore it.	No	String	2000	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
agencyCustom3	The agency custom note field. Only available for agency users. If organization client provides a value for this field, the system will ignore it.	No	String	2000	v1+
governmentStaff	Used to identify government staff. Only available for agency users. If organization client provides a value for this field, the system will ignore it.	No	String	200	v1+
governmentCounsel	Used to identify the Government Counsel (law firm) for an Invention Report. Only available for agency clients. If organization client provides a value for this field, the system will ignore it.	No	String	200	v1+
voidDispositionReason	The reason from the primary agency for voiding the Invention report. The reason will be added to the system as an Explanatory Notes in the Invention report. If organization client provides a value for this field, the system will ignore it.	No	String	500	v2+
govtRetainsRightsReason	The reason from the primary agency for changing Disposition Status to "Government Retains Rights" for the invention when the Title Election Status is "Under Evaluation", "Elect to Retain Title", "Government Takes Title (Award Terms)", or "Designated as Unpatented Biological Material or Research Tool". The reason will be added to the system as an Explanatory Notes in the Invention report. If organization user provides a value for this field, the system will ignore the value.	No	String	500	v2+

Table 7-4: inventionRequest JSON Attributes

7.2.3   Response Parameters

When the request is processed and the invention report is successfully updated, the Update Invention API endpoint returns an **inventionResponse** data object. The attributes of this object are described in **Section 7.4**.

7.3   Search Invention, v2

The Search Invention API allows users to specify any combination of the attributes to search for existing Invention Reports. The search will encompass all the Invention Reports from user's organization and from other organizations that have granted the user permission to view their Invention Reports. Once the user finds the Invention Report, they will be able to modify the Invention, add a Patent Report, or add a Utilization Report. Refer to Appendix A for samples of requests and responses.

7.3.1   Endpoint URI

This is an example of the endpoint for the Search Invention resource.

POST	/iedison/api/v2/inventions/search

7.3.2   Request Parameters

The request has the following elements:

- Headers: These are the request headers such as Accept or Content-Type. The Accept header defines the expected response format when the API returns the response. The Accept header is required for all requests.
- Body: The body contains the data that will be submitted as the POST request. When submitting a form, the format data and file content are sent in the body of the request.

The table below provides a description of the Search Invention request header and body parameters that are expected by the iEdison API.

Request Parameter	Description	Data Type	Version	In
accept	Specifies the response format that is expected. Set to "application/json".	String	v1+	header
inventionSearchCriteria	The JSON object that contains attributes used in the request. Refer to the table below for a description of the attributes.	String	v1+	form-data

Table 7-5: Search Invention Request Parameters

The table below lists the attributes that will be included in the **inventionSearchCriteria** parameter when searching for an Invention Report. The attributes are included in the JSON object as part of the **inventionSearchCriteria** form-data text element.

Request Parameter	Description	Data Type	Length	Version	In
limit	Total number of records to be retrieved per page. This field must be a number. • Max Value = 100 • Default = 20	Integer		v1+	body
offset	Page index specified by the user. • Default = 0 if user does not provide any offset in the request	Integer		v1+	body
inventionReportNumber	Automatically generated by iEdison for an Invention Report after data has been submitted, checked for errors, and verified.	String	100	v1+	body
inventionDocketNumber	An internal reference number of the grantee/contractor organization to help track a reported Invention(s)	String	30	v1+	body
grantContractNumber	The grant or contract number as specified by the agency. The format is defined by the agency.	String	80	v1+	body
inventorFirstName	The first name of the inventor.	String	50	v1+	body
inventorLastName	The last name of the inventor.	String	50	v1+	body
primaryAgency	The Primary Agency designated for each Invention Report in iEdison. Click here for a list of valid abbreviations.	String	50	v1+	body
granteeOrganizationName	The name of the organization established at registration.	String	100	v1+	body
titleElectionStatus	The status of the title to rights in the reported Invention. Refer to Section 12.15 for a list of valid values.	JSON Object	10	v1+	body
inventionTitle	The title of the Invention as it appears in the grantee/contractors employee's Invention Report.	String	255	v1+	body
inventionReportDateFrom	The From Date that the inventor disclosed in the subject Invention in writing to the recipient institution. • Format: MM/DD/YYYY	String	10	v1+	body
inventionReportDateTo	The To Date that the inventor disclosed in the subject	String	10	v1+	body

Request Parameter	Description	Data Type	Length	Version	In
	Invention in writing to the recipient institution. • Format: MM/DD/YYYY				
inventionKeyword	This field enables the grantee/contractor organization to designate key terms for searching for Invention Reports.	String	80	v1+	body
doeWaiver	DOE Waiver	String		v1+	body
governmentCounsel	Used to identify the Government Counsel (law firm) for an Invention Report.	String		v1+	body
governmentStaff	Used to identify government staff.	String		v1+	body
lastUpdatedFrom	The 'start from' search date against the invention last updated date. • Will use the last updated date for the invention, but if that is null, then the created date will be used. • Format: MM/DD/YYYY	String		v1+	body
lastUpdatedTo	The 'up to' search date against the Patent last updated date. • Format: MM/DD/YYYY	String		v1+	body

Table 7-6: inventionSearchCriteria JSON Attributes

7.3.3   Response Parameters

When the request is processed, the Search Invention API endpoint returns a list of inventions that match the search criteria in the **inventionResponse** data object. The attributes of this object are described in **Section 7.4**.

JSON Attribute Name	Description	Data Type	Version
totalRecords	The total number of records for the search.	Number	v1+
limit	The limit entered by the user while making the request i.e., total number of records the user wished to retrieve per page.	Number	v1+
offset	The page index specified by the user.	Number	v1+
inventions	A list of invention records which contains the inventionResponse data object.	Array [JSON Object]	v1+

Table 7-7: Search Invention Response Parameters

7.4 InventionResponse Data Object

The invention create, update, and search API endpoints share a common **InventionResponse** data object. The JSON attributes are described in the table below.

JSON Attribute Name	Description	Data Type	Version
inventionReportNumber	Automatically generated by iEdison for an Invention Report after data has been submitted, checked for errors, and verified.	String	v1+
granteeOrganizationName	The name of the organization established at registration.	String	v1+
institutionCode	The unique code assigned to the reporting organizations.	String	v1+
dunsNumber	The Data Universal Numbering System (DUNS) number provided by Dun & Bradstreet that identifies the grantee/contractor.	String	v1+
inventionTitle	The title of the Invention as it appears in the grantee/contractor's employee's Invention Report.	String	v1+
inventionDocketNumber	An internal reference number of the grantee/contractor organization to help track a reported Invention(s).	String	v1+
doesNumber	The DOE S-number is assigned to each DOE Invention. The number is mainly used in DOE's Invention tracking system.	String	v1+
parentInventionNumber	The Invention Report number used when an Invention is combined into another Invention as a parent Invention.	String	v1+
inventionReportDate	The date that the inventor discloses the subject Invention in writing to the recipient institution.	String	v1+
inventionSubmitDate	The date when Invention is submitted to the agency.	String	v1+
reportingOverdue	Indicates if an Invention is submitted outside limit of 60 days or 6 months.	Boolean	v1+
firstPublicationDate	The date of first publication, on sale, or public use initiating the on- year statutory period wherein valid Patent protection can still be obtained in the United States.	String	v1+
domesticManufactureWaiver	Indicates whether a Domestic Manufacture Waiver was requested by the organization.	Boolean	v1+
doeWaiver	DOE Waiver.	String	v1+
institutionCodeForOtherInstitutions	The Institution code for other organizations to view the Invention. A maximum of three additional iEdison registered organizations may be granted view-only access to an Invention Report.	Array [String]	v1+
keywords	Indicates any key terms for searching for Invention Reports.	Array [String]	v1+

JSON Attribute Name	Description	Data Type	Version
isExceptionCircumstanceDetermination	Is this invention made under a funding agreement subject to a determination of exceptional circumstances?	Boolean	v2+
inventors	**List of Inventors**	**Array [JSON Object]**	**v1+**
firstName	First name of the inventor.	String	v1+
lastName	Last name of the inventor.	String	v1+
middleInitial	Middle name or first initial of the inventor.	String	v1+
fedEmployee	Is the inventor a federal employee?	Boolean	v1+
fedAgency	If the inventor is a federal employee, the agency the inventor works for. Click here for a list of valid abbreviations.	String	v1+
id	The unique identifier assigned to the inventor.	Integer	v2+
primaryAgency	The Primary Agency designated for each Invention Report in iEdison. Click here for a list of valid abbreviations.	String	v1+
fundingAgreements	**The funding agreement is identified and reported in two parts, the Agency Designation (the acronym for the Federal Agency name) and the grant or contract award number corresponding to the agency that contributed to the Invention.**	**Array [JSON Object]**	**v1+**
agency	The federal government agency that made an award that was used to support the conception of the Invention or its first actual reduction to practice. Click here for a list of valid abbreviations.	String	v1+
grantNumber	The corresponding grant or contract number. The format of the grant or contract number is specified by the associated agency.	String	v1+
awardType	Indicates the type of award as a primary award or sub-award. Refer to Section 12.3 for a list of valid values.	String	v1+
agreementType	Indicates the type of agreement. Refer to Section 12.1 for a list of valid values.	String	v1+
id	The funding agreement primary unique identifier in the iEdison system.	Integer	v2+
subContractInfos	**Subcontractor Information**	**Array [JSON Object]**	**v1+**
subContractNumber	An additional grant or contract number for an Invention or Patent.	String	v1+
contractorName	The name of the subcontractor that provided the grant or contract.	String	v1+
contractorDUNS	The DUNS number of the subcontractor that provided the grant or contract.	String	v1+

JSON Attribute Name	Description	Data Type	Version
contractorCity	The city of the subcontractor that provided the grant or contract.	String	v1+
contractorState	The state of the subcontractor that provided the grant or contract. Refer to Section 12.14 for a list of valid values.	String	v1+
contractorCountry	The country of the subcontractor that provided the grant or contract. Refer to Section 12.4 for a list of valid values.	String	v1+
id	The subcontractor primary unique identifier in the iEdison system.	Integer	v2+
inventionStatus	**Title Election Status and Disposition Status**	**JSON Object**	**v1+**
titleElectionStatus	The status of the title to rights in the reported Invention. Refer to Section 12.15 for a list of valid values.	String	v1+
titleElectionDate	The legally binding date that the grantee/contractor elected to retain title to an Invention.	String	v1+
notElectTitleReason	This field is for the grantee/contractor to select the reason for choosing Does Not Retain Title in an Invention Report. Refer to Section 12.7 for a list of valid values.	String	v1+
notElectTitleOtherReason	If the titleElectionStatus is 'Does Not Retain Title' and notElectTitleReason is 'Other', this field is used to provide the description of the custom reason for not electing title.	String	v1+
dispositionStatus	The government's decision/outcome of the disposition of rights. Refer to Section 12.6 for a list of valid values.	String	v1+
dispositionRightsDate	The date the government decided on the disposition of rights.	String	v1+
doesNotRetainTitleDate	The date the grantee/contractor chose to Not Elect Title or retain Title in an Invention Report.	String	v1+
explanatoryNotes	**Explanatory Notes**	**Array [JSON Object]**	**v1+**
note	Explanatory notes or additional information about an Invention Report or Patent Report. Explanatory notes should not be used for data that is provided by other iEdison data fields.	String	v1+
creatorName	The full name of the user who entered the explanatory note.	String	v1+
createdDate	The date when the user entered the explanatory note.	String	v1+
id	The unique identifier assigned to the explanatory note.	Integer	v2+

JSON Attribute Name	Description	Data Type	Version
governmentNotes	**Government Notes which only return for agency system users.** This field and value will display to agency users only.	**Array [JSON Object]**	**v1+**
note	Government Notes are information about an Invention Report or Patent Report by federal agency users who have access to view the record.	String	v1+
creatorName	The full name of the user who entered the government note.	String	v1+
createdDate	The date when the user entered the government note.	String	v1+
id	The unique identifier assigned to the government note.	Integer	v2+
budgetIdentifiers	This contains a list of Budget Identifiers for the Invention report.	Array [String]	v1+
agencyCustom1	The agency custom note field. Only available for agency users. This field will not show in the responses to the organization system susers.	String	v1+
agencyCustom2	The agency custom note field. Only available for agency users. This field will not show in the responses to the organization system susers.	String	v1+
agencyCustom3	The agency custom note field. Only available for agency users. This field will not show in the responses to the organization system susers.	String	v1+
governmentStaff	Used to identify government staff. This field and value will display to agency users only. This field will not show in the responses to the organization system susers.	String	v1+
governmentCounsel	Used to identify the Government Counsel (law firm) for an Invention Report. This field and value will display to agency users only. This field will not show in the responses to the organization system susers.	String	v1+
disclosureDocumentAcceptDate	The date the Disclosure document was accepted.	Date	v1+
disclosureDocumentRejectDate	The date the Disclosure document was rejected.	Date	v1+
disclosureDocumentRejectReasons	The reason the Disclosure document was rejected.	Array [String]	v1+
createdDate	The date the Invention Report was created in the iEdison system.	String	v1+
lastUpdatedDate	The date the invention Report was last updated in the iEdison system.	String	v1+
id	The unique identifier assigned to the Invention Report in the iEdison system.	Integer	v2+

Table 7-8: InventionResponse JSON Attributes

8   Patent API Reference

The Patent API allows an organization/agency to create, update or search for patent records.

The following changes were made to Version 3 (v3):

- Renamed attribute 'patentDocketNum' to 'patentDocketNumber' in patent response data object.

The following changes were made to Version 2 (v2):

- Renamed attribute 'confLicenseReceiptDate' to 'confLicenseAcceptDate' in patent response data object.
- Renamed attribute 'govtSuppClauseReceiptDate' to 'govtSuppClauseAcceptDate' in patent response data object.
- Added 'id' attribute to invention response for 'inventor', 'fundingAgreement', and 'parents' JSON objects.

Note:

- Create Patent, Version 1 (v1) will no longer be supported after July 18th, 2025.
- Create Patent, Vresion 2 (v2) will no longer be supported after May 29th, 2026.

8.1   Create Patent, v3

The Create Patent API endpoint allows an organization/agency to create a Patent Report in the iEdison system. Refer to Appendix B for samples of requests and responses.

8.1.1   Endpoint URI

Below is the latest version 3 endpoint for the Create Patent resource. It is recommended to use the latest version of the

POST	/iedison/api/v3/patents/create

8.1.2   Request Parameters

The request has the following elements:

- Headers: These are the request headers such as Accept or Content-Type. The Accept header defines the expected response format when the API returns the response. The Accept header is required for all requests.
- Body: The body contains the data that will be submitted as the POST request. When submitting a form, the format data and file content are sent in the body of the request.

The table below provides the explanation of the Create Patent request header and body parameters that are expected by the iEdison API.

Request Parameter	Description	Required	Data Type	Version	In
accept	Specifies the response format that is expected. Set to "application/json".	Yes	String	v1+	header
patentRequest	The JSON object that contains attributes used in the request. Refer to the table below for a description of the attributes.	Yes	String	v1+	form-data
confirmatoryLicense	The Confirmatory License document file for the Patent record. The following file types are allowed: CSV, GIF, JPEG, JPG, PNG, PDF, DOCX, DOC, TIFF, TIF, TXT, XLS, XLSX, PPT, PPTX, ODT, and RTF. The maximum file size is 50MB.	No	Binary Attachment	v1+	form-data
governmentSupportClause	The Government Support Clause document file for the Patent record. The following file types are allowed: CSV, GIF, JPEG, JPG, PNG, PDF, DOCX, DOC, TIFF, TIF, TXT, XLS, XLSX, PPT, PPTX, ODT, and RTF. The maximum file size is 50MB.	No	Binary Attachment	v1+	form-data

Table 8-1: Create Patent Request Parameters

The table below lists the attributes that will be included in the **patentRequest** parameter when creating a patent report. The attributes are included in the JSON object as part of the **patentRequest** form-data text element.

JSON Attribute Name	Description	Required	Data Type	Length	Version
inventionReportNumber	Automatically generated by iEdison for an Invention Report after data has been submitted, checked for errors, and verified.	Yes	String	25	v1+
granteeOrganizationName	The name of the organization established at registration.	No	String	100	v1+
patentDocketNumber	The Patent Docket Number is an internal reference number of the grantee/contractor organization to help track a reported Patent(s).	No	Integer	30	v1+
patentStatus	Indicates the status of the Patent. Refer to Section 12.13 for a list of valid values.	Yes	String	255	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
patentTitle	The exact title of the U.S. Patent or Patent application as submitted by the Institution to iEdison or to the USPTO.	Yes	String	255	v1+
patentApplicationType	Patent Application Type of a record. Refer to Section 12.10 for a list of valid values.	Yes	String	255	v1+
confirmatoryLicenseExcutionDate	The date when the Confirmatory License was executed for the Patent. This is required when the confirmatoryLicense document is provided in form-data.	Conditional	String	10	v1+
nonProvisionalPatentApplication	**The Non-provisional Patent Application number and date object. This is required only when ORD, DIV, CON, CIP is used for patentApplicationType.**	**Conditional**	**JSON Object**		**v1+**
nonProvisionalApplicationNumber	The Non-provisional Patent Application Number field is for the non-provisional Patent application.	Yes	String	18	v1+
nonProvisionalApplicationDate	This field is used for the filing date of the non-provisional Patent application with the U.S. Patent and Trademark Office (USPTO). • Format: MM/DD/YYYY	Yes	String	10	v1+
issuedApplicationNumber	The unique identifier of a Patent.	No	String	50	v1+
issuedApplicationDate	The date the Patent number was issued. • Format: MM/DD/YYYY	No	String	10	v1+
expirationDate	Estimated date of Patent expiration. • Format: MM/DD/YYYY	No	String	10	v1+
provisionalPatentApplication	**The Non-provisional Patent Application number and date object. This is required only when PROV is used for patentApplicationType.**	**Conditional**	**JSON Object**		**v1+**
provisionalApplicationNumber	The unique identifier for a provisional Patent application created upon filing at the USPTO.	Yes	String	10	v1+
provisionalApplicationDate	Used for the filing date of the U.S. provisional Patent application with the USPTO.	Yes	String	10	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
	• Format: MM/DD/YYYY				
pctPatentApplication	**The Non-provisional Patent Application number and date object. This is required only when PCT is used for patentApplicationType.**	**Conditional**	**JSON Object**		**v1+**
pctApplicationNumber	(Patent Cooperation Treaty) number is used to uniquely identify a PCT type Patent application.	Yes	String	10	v1+
pctApplicationDate	This field is used for the filing date of the Patent Cooperation Treaty (PCT) application provided by the World Manufacturer Intellectual Property Organization (WIPO). • Format: MM/DD/YYYY	Yes	String	10	v1+
parentPatents		**No**	**Array [JSON Object]**		**v1+**
inventionReportNumber	The unique Invention Report Number for the parent Patent.	No	String	25	v1+
patentDocketNumber	The Patent Docket Number is an internal reference number of the grantee/contractor organization to help track a reported Patent(s).	No	String	30	v1+
inventors	**List of Inventors**	**Yes**	**Array [JSON Object]**		**v1+**
firstName	First name of the inventor.	Yes	String	80	v1+
lastName	Last name of the inventor.	Yes	String	80	v1+
middleInitial	Middle name or first initial of the inventor.	No	String	30	v1+
fedEmployee	Is the inventor a federal employee? • true = federal employee • false = not a federal employee (default)	No	Boolean		v1+
fedAgency	If the inventor is a federal employee, the agency the inventor works for. Click here for a list of valid abbreviations.	No	String	80	v1+
foreignFilings	**Patent Foreign Filing** **The countryName and filingDate do not have to be unique. Users can enter**	**No**	**Array [JSON Object]**		**v1+**

JSON Attribute Name	Description	Required	Data Type	Length	Version
	Foreign Filings from the same country on the same date.				
countryName	The country name of the foreign filing. The country name does not have to be unique. Refer to Section 12.4 for a list of valid country Name values.	Yes	String	15	v1+
status	The foreign filing status for the Patent. Refer to Section 12.6 for a list of valid values.	Yes	String		v1+
filingDate	The date that the foreign Patent was issued. • Format: MM/DD/YYYY	Yes	String	10	v1+
explanatoryNotes	**Explanatory notes are used to note information about the report.**	**No**	**JSON Object**		**v1+**
note	Explanatory notes are be used to note information about an Invention Report or Patent Report. Explanatory notes should not be used for data that is provided by other iEdison data fields.	Yes	String	500	v1+
governmentNotes	**Notes written by the agency regarding the report. If organization client provides value(s) for this list field, the system will ignore them.**	**No**	**JSON Object**		**v1+**
note	Government Notes are used to note information about an Invention Report or Patent Report by federal users who have access to view the record.	Yes	String	500	v1+

Table 8-2: patentRequest JSON Attributes

8.1.3   Response Parameters

When the request is processed and the patent report is successfully created, the Create Patent API endpoint returns a **patentResponse** data object. The attributes of this object are described in **Section 8.4**.

8.2   Update Patent, v3

The Update Patent API endpoint allows an organization/agency to update an existing Patent Report in the iEdison system. Refer to Appendix B for samples of requests and responses.

When updating Foreign Filings, the request must contain the complete list of countries. The system will update by removing the old list and replacing it with the new list.

See the table below for examples,

If there is an existing Foreign Filing in the Patent record	Submit and update request with the following Foreign Filing(s)	Result in iEdison
Country A	Country A Country B	Delete Country A from the Foreign Filing list and add Country A and Country B to the Foreign Filing list.
Country A	None	Delete Country A from the Foreign Filing list and no country is added to the Foreign Filing list.
None	Country A Country B	Add Country A and Country B to the Foreign Filing list.
None	None	No updates or changes.

Table 8-3: Rules for Updating Foreign Filings Using API

8.2.1   Endpoint URI

This is an example of the endpoint for the Update Patent resource.

POST	/iedison/api/v3/patents/update

8.2.2   Request Parameters

The request has the following elements:

- Headers: These are the request headers such as Accept or Content-Type. The Accept header defines the expected response format when the API returns the response. The Accept header is required for all requests.
- Body: The body contains the data that will be submitted as the POST request. When submitting a form, the format data and file content are sent in the body of the request.

The table below provides the description of the Update Patent request header and body parameters that are expected by the iEdison API.

Request Parameter	Description	Required	Data Type	Version	In
accept	Specifies the response format that is expected. Set to "application/json".	Yes	String	v1+	header

Request Parameter	Description	Required	Data Type	Version	In
patentRequest	The JSON object that contains attributes used in the request. Refer to the table below for a description of the attributes.	Yes	String	v1+	form-data
confirmatoryLicense	The Confirmatory License document file for the Patent record. The following file types are allowed: CSV, GIF, JPEG, JPG, PNG, PDF, DOCX, DOC, TIFF, TIF, TXT, XLS, XLSX, PPT, PPTX, ODT, and RTF. The maximum file size is 50MB.	No	Binary Attachment	v1+	form-data
governmentSupportClause	The Government Support Clause document file for the Patent record. The following file types are allowed: CSV, GIF, JPEG, JPG, PNG, PDF, DOCX, DOC, TIFF, TIF, TXT, XLS, XLSX, PPT, PPTX, ODT, and RTF. The maximum file size is 50MB.	No	Binary Attachment	v1+	form-data

Table 8-4: Update Patent Request Parameters

The table below lists the attributes that will be included in the **patentRequest** parameter when updating a Patent Report. The attributes are included in the JSON object as part of the **patentRequest** form-data text element.

The system updates the government clause file if it is provided during the update operation. If the government clause file is not provided during the update operation, the system checks for the presence of a government clause file uploaded in previous operations. If a government clause file is not present, the system will not perform an update operation and returns an error.

JSON Attribute Name	Description	Required	Data Type	Length	Version
inventionReportNumber	Automatically generated by iEdison for an Invention Report after data has been submitted, checked for errors, and verified.	Yes	String	100	v1+
granteeOrganizationName	The name of the organization established at registration. The system is no longer using this field.	No	String	100	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
patentDocketNumber	The Patent Docket Number is an internal reference number of the grantee/contractor organization to help track a reported Patent(s).	No	String	30	v1+
patentStatus	Indicates the status of the Patent. Refer to Section 12.13 for a list of valid values.	Yes	String	255	v1+
patentTitle	The exact title of the U.S. Patent or Patent application as submitted by the Institution to iEdison or to the USPTO.	Yes	String		v1+
patentApplicationType	Patent Application Type of a record. Refer to Section 12.10 for a list of valid values.	Yes	String		v1+
pctPatentApplication		**Conditional**	**JSON Object**		v1+
pctAppNum	Patent Cooperation Treaty (PCT) number is used to uniquely identify a PCT type Patent application.	Yes	String		v1+
pctAppDate	This field is used for the filing date of the Patent Cooperation Treaty (PCT) application. • Format: MM/DD/YYYY	Yes	String		v1+
provisionalPatentApplication		**Conditional**	**JSON Object**		v1+
provisionalAppNum	The unique identifier a provisional Patent application created upon filing at the USPTO.	Yes	String		v1+
provisionalAppDate	This field is used for the filing date of the U.S. provisional Patent application with the USPTO. • Format: MM/DD/YYYY	Yes	String		v1+
nonProvisionalPatentApplication		**Conditional**	**JSON Object**		v1+
nonProvisionalApplicationNumber	The Non-provisional Patent Application Number field is for the non-provisional Patent application.	Yes	String	10	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
nonProvisionalApplication Number	The Non-provisional Patent Application Number field is for the non-provisional Patent application.	Yes	String	10	v1+
nonProvisionalApplication Date	This field is used for the filing date of the non-provisional Patent application with the U.S. Patent and Trademark Office (USPTO). • Format: MM/DD/YYYY	Yes	String	10	v1+
issuedApplicationNumber	The unique identifier of a Patent.	No	String	50	v1+
issuedApplicationDate	The date the Patent number was issued. • Format: MM/DD/YYYY	No	String	10	v1+
expirationDate	Estimated date of Patent expiration. • Format: MM/DD/YYYY	No	String	10	v1+
parentPatents	**Parent Patent**	**No**	**Array [JSON Object]**		**v1+**
inventionReportNumber	Automatically generated by iEdison for an Invention Report after data has been submitted, checked for errors, and verified.	No	String	100	v1+
patentDocketNumber	The Patent Docket Number is an internal reference number of the grantee/contractor organization to help track a reported Patent(s).	No	String	30	v1+
inventors	**List of Inventors**	**Yes**	**Array [JSON Object]**		**v1+**
firstName	First name of the inventor.	Yes	String	80	v1+
lastName	Last name of the inventor.	Yes	String	80	v1+
middleInitial	Middle name or first initial of the inventor.	No	String	30	v1+
fedEmployee	Is the inventor a federal employee? • true = federal employee • false = not a federal employee (default)	No	Boolean		v1+
fedAgency	If the inventor is a federal employee, the agency the inventor works for. Click here	No	String	80	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
	for a list of valid abbreviations.				
foreignFilings	**Patent Foreign Filing** • **The countryName and filingDate do not have to be unique. Users can enter Foreign Filings from the same country on the same date.** • **When updating foreign filings, the request must contain the complete list of countries. The system will update by removing the old list and replacing it with the new list.**	**No**	**JSON Object**		v1+
countryName	The country name of the foreign filing. The country name does not have to be unique. Refer to Section 12.4 for a list of valid values.	Yes	String	15	v1+
status	The foreign filing status for the Patent. Refer to Section 12.13 for a list of valid values.	Yes	String		v1+
filingDate	The date that the foreign Patent was issued. • Format: MM/DD/YYY	Yes	String	10	v1+
explanatoryNotes	**Explanatory notes are used to note information about the report.**	**No**	**JSON Object**		**v1+**
note	Explanatory notes are be used to note information about an Invention Report or Patent Report. Explanatory notes should not be used for data that is provided by other iEdison data fields.	Yes	String	500	v1+
governmentNotes	**Notes written by the agency regarding the report. If organization client provides value(s) for this list field, the system will ignore them.**	**No**	**JSON Object**		**v1+**
note	Government Notes are used to note information about an Invention Report or Patent Report by federal users who have access to view the record.	Yes	String	500	v1+

Table 8-5: patentRequest JSON Attributes

8.2.3   Response Parameters

When the request is processed and the patent report is successfully updated, the Update Patent API endpoint returns a **patentResponse** data object. The attributes of this object are described in **Section 8.4**.

8.3   Search Patent, v3

The Search Patent API allows users to specify any combination of the attributes to search for existing Patent Reports. The search criteria are applied using an "AND" operation across the various attributes specified in the JSON request. For example, if the patent search has a Patent Docket Number and Primary Agency, the search results include all the searches that match both the Patent Docket Number and the Primary Agency. Refer to Appendix B for samples of requests and responses.

8.3.1   Endpoint URI

This is an example of the endpoint for the Search Patent resource.

POST	/iedison/api/v3/patents/search

8.3.2   Request Parameters

The request has the following elements:

- Headers: These are the request headers such as Accept or Content-Type. The Accept header defines the expected response format when the API returns the response. The Accept header is required for all requests.
- Body: The body contains the data that will be submitted as the POST request. When submitting a form, the format data and file content are sent in the body of the request.

The table below provides the explanation of the Search Patent request header and body parameters that are expected by the iEdison API.

Request Parameter	Description	Data Type	Version	In
accept	Specifies the response format that is expected. Set to "application/json".	String	v1+	header
patentSearchCriteria	The JSON object that contains attributes used in the request. Refer to the table below for a description of the attributes.	String	v1+	

Table 8-6: Search Patent Request Parameters

The table below shows the parameters that will be included in the JSON body only one time during the processing of Search Patents Request.

The table below lists the attributes that will be included in the **patentSearchCriteria** parameter when searching for a Patent Report. The attributes are included in the JSON object as part of the **patentSearchCriteria** form-data text element.

JSON Attribute Name	Description	Required	Data Type	Length	Version
limit	Total number of records to be retrieved per page. This field must be a number. • Max Value = 100 • Default = 20	No	Integer		v1+
offset	Indicates the page index. • Default = 0 if user does not provide any offset in the request	No	Integer		v1+
inventionReportNumber	Automatically generated by iEdison for an Invention Report after data has been submitted, checked for errors, and verified.	No	String	100	v1+
inventionDocketNumber	An internal reference number of the grantee/contractor organization to help track a reported Invention(s).	No	String	30	v1+
inventionReportDateFrom	The From Date that the inventor disclosed the subject Invention in writing to the recipient institution. • Format: MM/DD/YYYY	No	String	10	v1+
inventionReportDateTo	The To Date that the inventor disclosed the subject Invention in writing to the recipient institution. • Format: MM/DD/YYYY	No	String	10	v1+
inventionTitle	The title of the Invention as it appears in the grantee/contractor's employee's Invention Report.	No	String	255	v1+
primaryAgency	The Primary Agency designated for each Invention Report in iEdison. Click here for a list of valid abbreviations.	No	String	1	v1+
titleElectionStatus	The status of the title to rights in the reported Invention. Refer to Section 12.15 for a list of valid values.	No	Array [String]	50	v1+
granteeOrganizationName	The name of the organization established at registration.	No	String	100	v1+
grantContractNumber	The grant or contract number as specified by the agency. The format is defined by the agency.	No	String	50	v1+
patentApplicationType	The Patent Application Type of a record. Refer to Section 12.10 for a list of valid values.	No	String	25	v1+
patentStatus	Indicates the status of the Patent. Refer to Section 12.7 for a list of valid values.	No	String	50	v1+
patentDocketNumber	The Patent Docket Number is an internal reference number of the grantee/contractor organization to help track a reported Patent(s).	No	String	30	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
patentFilingDateFrom	The 'starting from' search date against the PCT, Provisional, Non-Provisional Patent application filing date. • Format: MM/DD/YYYY	No	String	10	v1+
patentFilingDateTo	The 'up to' search date against the PCT, Provisional, Non-Provisional Patent application filing date. • Format: MM/DD/YYYY	No	String	10	v1+
patentTitle	The exact title of the U.S. Patent or Patent application as submitted by the Institution to iEdison or to the USPTO.	No	String	50	v1+
inventorFirstName	The first name of the inventor.	No	String	50	v1+
inventorLastName	The last name of the inventor.	No	String	50	v1+
lastUpdatedFrom	The 'start from' search date against the Patent last updated date. • Will use the last updated date for the invention, but if that is null, then the created date will be used. • Format: MM/DD/YYYY	No	String	10	v1+
lastUpdatedTo	The 'up to' search date against the Patent last updated date. • Format: MM/DD/YYYY	No	String	10	v1+

8.3.3 Response Parameters

When the request is processed, the Search Invention API endpoint returns a list of inventions that match the search criteria in the **patentResponse** data object. The attributes of this object are described in **Section 8.4**.

JSON Attribute Name	Description	Data Type	Version
totalRecords	The total number of records for the search.	Number	v1+
limit	The limit entered by the user while making the request, i.e., total number of records the user wants to retrieve per page.	Number	v1+
offset	The page index specified by the user. • Default offset starts with 0 if user does not provide any offset in the request.	Number	v1+
patents	A list of patent records which contains the patentResponse data object.	Array [JSON Object]	v1+

Table 8-7: patentSearchCriteria JSON Attributes

8.4 patentResponse Data Object

The create, update, and search Patent API shares the same **patentResponse** data object. The JSON attributes are described in the table below.

Response Parameter	Description	Data Type	Version
id	System generated sequence number used for ID of the Patent	Integer	v1+
patentDocketNum	The Patent Docket Number is the internal reference number of the grantee/contractor organization to help track a reported Patent(s). This field is supported in version 1 and version 2 only. This attribute is replaced with patentDocketNumber in version 3.	String	v1, v2
patentDocketNumber	The Patent Docket Number is the internal reference number of the grantee/contractor organization to help track a reported Patent(s).	String	v3
inventionReportNumber	The unique Invention Report Number which identifies the Invention record in iEdison that the Patent is associated with.	String	v1+
issuedApplicationNumber	The Patent number provided by USPTO when the Patent is issued.	String	v1+
issuedApplicationDate	The date the Patent number was issued.	String	v1+
pctAppNum	The Patent Cooperation Treaty (PCT) number is used to uniquely identify a PCT type Patent application.	String	v1+
pctAppDate	The filing date of the Patent Cooperation Treaty (PCT) application.	String	v1+
provisionalAppNum	The unique identifier a provisional Patent application created upon filing at the USPTO.	String	v1+
provisionalAppDate	The filing date of the U.S. provisional Patent application with the USPTO.	String	v1+
nonProvisionalAppNum	The Non-provisional Patent Application Number field is for the non-provisional Patent application.	String	v1+
nonProvisionalAppDate	The filing date of the non-provisional Patent application with the U.S. Patent and Trademark Office (USPTO)	String	v1+
patentApplicationType	The Patent Application Type of a record. Refer to Section 12.10 for a list of valid values.	String	v1+
patentReceiptDate	The date the Patent was received by government.	String	v1+
expireDate	The estimated date the Patent will expire.	String	v1+
patentTitle	The exact title of the U.S. Patent or Patent application as submitted by the Institution to iEdison or to the USPTO.	String	v1+
patentStatus	Indicates the status of the Patent. Refer to Section 12.13 for a list of valid values.	String	v1+
confLicenseAcceptDate	The date the Confirmatory License was accepted.	String	v2+
confLicenseRejectDate	The date the Confirmatory License was rejected by the Government Agency.	String	v1+
confLicenseRejectComment	The reason the Confirmatory License was rejected.	String	v1+
confLicenseOutdated	Indicates if the Confirmatory License is outdated.	String	v1+
govtSuppClauseAcceptDate	The date the Federal Support Clause was accepted by the government.	String	v2+

Response Parameter	Description	Data Type	Version
govtSuppClauseRejectDate	The date the Government Support Clause inclusion was rejected by the Government Agency.	String	v1+
govtSuppClauseRejectComment	The reason for Government Support Clause rejection displayed to grantee/contractor institution.	String	v1+
govtActionDate	Government Action Date	String	v1+
domesticWaiverDecisionFlag	Indicates the Domestic Waiver decision.	Boolean	v1+
domesticWaiverDecisionDate	The Domestic Waiver Decision date.	String	v1+
parentPatents	**List of Parent Patents**	**Array [JSON Object]**	**v1+**
id	The unique identifier for the parent patent record in iEdison system	Integer	v2+
inventionReportNumber	The unique Invention Report Number for the parent Patent.	String	v1+
patentDocketNumber	The Patent Docket Number is an internal reference number of the grantee/contractor organization to help track a reported Patent(s).	String	v1+
confirmatoryLicenseExcutionDate	The Confirmatory License date of execution for EPAS submission.	String	v1+
abandonedReason	The reason a Patent is abandoned.	String	v1+
extensionDays	The number of days Patent provisional application date has been extended.	Integer	v1+
usptoAppStatus	The USPTO application status of the Patent.	String	v1+
usptoAppStatusDate	The date of USPTO application.	String	v1+
usptoLastSyncDate	The date of last sync with USPTO.	String	v1+
assigned	Indicates if the Patent has been assigned to another organization.	Boolean	v1+
explanatoryNotes	**Explanatory notes are notes about this patent that are permanently attached to this Patent Report.**	**Array [JSON Object]**	**v1+**
id	The unique identifier assigned to the explanatory note in the iEdison system.	Integer	v2+
content	Explanatory notes that are permanently attached to this Patent Report.	String	v1+
code	The discriminator value: 1 for Invention Government Note 2 for Invention Explanatory 11 for Patent Government Note 12 for Patent Explanatory 3 for Discussion"	Integer	v1+
creatorOrganization	Federal Agency or External Institution Name	String	v1+
governmentNotes	**Government Notes are used to note information about an Invention Report or Patent Report by federal users who have access to view the record. This is populated only for agency system accounts.**	**Array [JSON Object]**	**v1+**

Response Parameter	Description	Data Type	Version
id	The unique identifier assigned to the government note in the iEdison system.	Integer	v2+
content	Government notes are used to note information about an Invention Report or Patent Report by federal users who have access to view the record.	String	v1+
code	The discriminator value: 1 for Invention Government Note 2 for Invention Explanatory 11 for Patent Government Note 12 for Patent Explanatory 3 for Discussion"	Integer	v1+
creatorOrganization	Federal Agency or External Institution Name	String	v1+
govSupClauseActions	**Government Support Clause Actions**	**Array [JSON Object]**	**v1+**
id	The unique identifier assigned to Government Support Clause Action.	Int	v2+
actionType	The type of action. Refer to Section 12.10 for a list of valid values.	String	v1+
documentType	The type of document. Refer to Section 12.10 for a list of valid values.	String	v1+
actionDate	The date the action was taken.	Date	v1+
reasonText	The reason for the action.	String	v1+
foreignFilings	**Foreign Filings for the patent.**	**Array [JSON Object]**	**v1+**
id	The unique identifier assigned to the foreign filing record in the iEdison system.	Integer	v2+
countryName	The country name of the foreign filing record.	String	v1+
status	The status of the foreign filing.	String	v1+
filingDate	The patent foreign filing date.	String	v1+
inventors	**The inventor records for the patent.**	**Array [JSON Object]**	**v1+**
id	The unique identifier assigned to the patent inventor record in the iEdison system.	Integer	v2
firstName	The first name of the inventor.	String	v1+
lastName	The last name of the inventor.	String	v1+
middleInitial	The middle name or first initial of the inventor.	String	v1+
fedEmployee	Is the inventor a federal employee? • true = federal employee • false = not a federal employee (default)	Boolean	v1+
fedAgency	If the inventor is a federal employee, the agency the inventor works for. Click here for a list of valid abbreviations.	String	v1+
createdDate	The date the Patent record was created.	String	v2
lastUpdatedDate	The date the Patent record was last updated.	String	v2

Table 8-8: patentResponse JSON Attributes

9   Utilization API Reference

The Utilization API allows an organization/agency to create, update, and search for an existing utilization record. The information required to submit a request will depend on the reporting year and the latest stage of development specified. The graphic below shows what reporting years each version supports.

Figure 9-1: Utilization API Versions

The latest version of the Create Utilization API, Version 3 (v3) contains the following changes:

- There are 2 options for entering licensees' information:
    1. A new object, "licensees" was created with the following attributes. These parameters are for reporting year is 2023 and beyond.
        a. 'licenseeName'
        b. 'exclusiveCount'
        c. 'nonExclusiveCount'
        d. 'smallBusiness'
    2. If not using the "licensees" attribute above for reporting year 2023, then use the following attributes for backwards compatibility.
        a. 'exclusiveLicensesOptions'
        b. 'nonExclusiveLicensesOptions'
        c. 'exclusiveLicensees'
        d. 'nonExclusiveLicensees'
        e. "smallBusinessLicensesOptions'
- v3 is backwards compatible and will continue to support all the changes that were previously made in v2 for utilizations with Fiscal Year 2023 and prior.

9.1   Create Utilization, v3

The Create Utilization API allows an organization/agency to a create Utilization Report for an invention. Refer to Appendix C for samples of requests and responses.

9.1.1 Endpoint URI

This is an example of the endpoint for the Create Utilization resource.

POST	/iedison/api/{version}/utilizations/create version: [v2, v3]

9.1.2 Request Parameters

The request has the following elements:

- Headers: These are the request headers such as Accept or Content-Type. The Accept header defines the expected response format when the API returns the response. The Accept header is required for all requests.
- Body: The body contains the data that will be submitted as the POST request. When submitting a form, the format data and file content are sent in the body of the request.

The table below provides a description of the Create Utilization request header and body parameters that are expected by the iEdison API.

Request Parameter	Description	Required	Data Type	Version	In
accept	Specifies the response format that is expected. Set to "application/json".	Yes	String	v2+	header
utilizationRequest	The JSON object that contains attributes used in the request. Refer to the table below for a description of the attributes.	Yes	String	v2+	raw

Table 9-1: Create Utilization Request Parameters

The table below lists the attributes that will be included in the **utilizationRequest** parameter when creating a utilization report. The attributes are included in the JSON object as part of the **utilizationRequest** form-data text element.

JSON Attribute Name	Description	Required	Data Type	Length	Version
inventionReportNumber	The Invention Report number the Utilization Report is associated with.	Yes	String	25	v2+
reportingYear	The year for which the Utilization Report is being submitted. Accepted values: • Enter up to 5 years back from the Date Invention Reported to Organization up to current Calendar year. For example, if inventionReportDate =	Yes	Integer	4	v2+

JSON Attribute Name	Description	Required	Data Type	Length	Version
	03/01/2016 and calendar year is 2024, the valid values are 2011 through 2024 (inclusive).				
latestStageDev	The latest stage of development of any product arising from this Invention. Refer to Section 12.1 for a list of latest valid values.	Yes	String	30	v2+
firstCommercialSaleYear	The year the product embodying the Invention was first sold (date of first commercial sale). Required if latestStageDev = "Commercialized". Accepted values: • Enter up to 5 years back from the Date Invention Reported to Organization up to current Calendar year. For example, if inventionReportDate = 03/01/2016 and calendar year is 2022, the valid values are 2011 through 2022 (inclusive).	Yes (Conditionally)	Integer		v2+
totalIncome	Total income from royalty or option agreements for the Invention. Required if latestStageDev = "Commercialized" or "Licensed".	Yes (Conditionally)	Number (float)		v2+
manufacturingWaiver	This is for "6. Did the grantee organization/contractor or any of the exclusive licensees request a waiver of the U.S. manufacturing requirements in the designated reporting period?". The value 1 should be used for "Yes" and 0 should be used for "No". This field is only used for utilization that has reporting fiscal year of 2022 and prior. If value is provided for utilization with reporting fiscal year of 2023 and after, the system will ignore this field.	No	Number		v1+
manufacturingWaiverTotal	This is for "7. If yes, how many such waivers were obtained?". This field is only used for utilization that has reporting fiscal year of 2022 and prior. If value is provided for	No	Number		v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
	utilization with reporting fiscal year of 2023 and after, the system will ignore this field.				
licensees	**The licensees associated with the invention.** **This object is only used if reportingYear is greater than or equal to 2024.**	**Yes (Conditionally)**	**Array [JSON Object]**		**v3**
licenseeName	The name of the licensee. The name must be unique.	Yes	String	255	v3
exclusiveCount	The number of exclusive licenses/option agreements that were active for the Invention in the designated reporting period.		Integer		v3
nonExclusiveCount	The number of non-exclusive licenses/option agreements that were active for the Invention in the designated reporting period.		Integer		v3
smallBusiness	The flag to indicate if the licensee is designated as small business.		Boolean		v3
exclusiveLicensesOptions	In the designated reporting period, how many exclusive licenses and/or options are active? • The number of exclusive licenses/option agreements for the Invention. • Required if latestStageDev = "Commercialized" or "Licensed". • **This is only valid if reportingYear = "2023".**	Yes (Conditionally)	Integer		v2 only
exclusiveLicensees	The exclusive licensee names for the invention. • Required if exclusiveLicensesOptions is greater than 0. **This is only valid if reportingYear = "2023".**	Yes (Conditionally)	Array [String]		v2 only
nonExclusiveLicensesOptions	In the designated reporting period, how many non-exclusive licenses and/or options are active? • The number of non-exclusive licenses/option agreements for the Invention. • Required if latestStageDev = "Commercialized" or "Licensed".	Yes (Conditionally)	Integer		v2 only

JSON Attribute Name	Description	Required	Data Type	Length	Version
	• **This is only valid if reportingYear = "2023".**				
nonExclusiveLicensees	The non-exclusive licensee names for the invention. • Required if nonExclusiveLicensesOptions is greater than 0. **This is only valid if reportingYear = "2023".**	Yes (Conditionally)	Array [String]		v2 only
smallBusinessLicensesOptions	How many licenses and/or options of any type to small businesses (<500 employees) are active in the designated reporting period? • The number of small business licenses/option agreements for the Invention. • Required if latestStageDev = "Commercialized" or "Licensed". • **This is only valid if reportingYear = "2023".**	Yes (Conditionally)	Integer		v2 only

isUSManufacturingRequired1	• If latestStageDev = "Commercialized" or "Licensed".
	
	Other than U.S. Preference (35 U.S.C. 204), is the invention subject to any U.S. manufacturing requirements (e.g., U.S. Competitiveness provision, a U.S. Manufacturing DEC, etc.)?
	
	• Accepted values are:
	   o N = No
	   o Y = Yes
	
	• **This is only used if reportingYear is greater than or equal to 2023.**
		Yes (Conditionally)	String	1	v2+

isUSManufacturingRequired2	• If latestStageDev = "Commercialized" or "Licensed" • If isUSManufacturingRequired1 = Y Then, answer the following:	Yes (Conditionally)	String	3	v2+

JSON Attribute Name	Description	Required	Data Type	Length	Version
	In the designated reporting period, do all licenses include a requirement that any products embodying the subject invention or produced using the subject invention will be manufactured substantially in the United States (including manufacturing requirements other than 35 U.S.C. 204)? ○ Accepted values are: ▪ N = No ▪ Y = Yes • If isUSManufacturingRequired1 = N Then, answer the following: In the designated reporting period do all grants to any person of the exclusive right to use or sell the subject invention in the United States require that any products embodying the subject invention or produced using the subject invention will be manufactured substantially in the United States as required by 35 U.S.C. 204? ○ Accepted values are: ▪ N = No ▪ Y = Yes ▪ N/A = Not Applicable Refer to Sections 12.21 and 12.22 for the question logic. **This is only used if reportingYear is greater than or equal to 2023.**				
isUSManufacturingRequired3	• If latestStageDev is "Commercialized" • If isUSManufacturingRequired1 = Y Then, answer the following:	Yes (Conditionally)	String	3	v2+

JSON Attribute Name	Description	Required	Data Type	Length	Version
	In the designated reporting period, are all products embodying the subject invention or produced using the subject invention manufactured substantially in the United States (including manufacturing requirements other than 35 U.S.C. 204)? o Accepted values are: ▪ N = No ▪ Y = Yes • If isUSManufacturingRequired1 = N Then, answer the following: In the designated reporting period are all products embodying the subject invention or produced using the subject invention manufactured substantially in the United States for all grants to any person of the exclusive right to use or sell the subject invention in the United States as required by 35 U.S.C. 204? o Accepted values are: ▪ N = No ▪ Y = Yes ▪ N/A = Not Applicable Refer to Sections 12.21 and 12.22 for the question logic. **This is only used if reportingYear is greater than or equal to 2023.**				
notes	General notes • Required if commercializationPlanId = "3" or "6".	Yes (Conditionally)	String	1000	v2+
commercializationPlanId	What are your current commercialization plans for this invention?	Yes (Conditionally)	Number		v2+

JSON Attribute Name	Description	Required	Data Type	Length	Version
	• The commercialization plan for the invention. • Required if latestStageDev = "Not Licensed or Commercialized". Refer to Section 12.20 for a list of valid values.				
newUsJobs	The approximate number of new U.S.-based jobs created because of commercialization efforts during the reporting period. For DOE Invention only.	No	Integer		v2+
newUsCompanies	The number of new U.S.-based companies created from the commercialization efforts during the reporting period. For DOE Invention only.	No	Integer		v2+
manufacturingCommProds	**The manufacturing commercial products made using or Embodying the Subject Invention(s).**	**No**	**Array [JSON Object]**		**v2+**
productName	The unique commercial product name.	Yes	String	100	v2+
naicsCode	The North American Industry Classification System (NAICS) code is used by Federal agencies in classifying business establishments. For DOE invention only.	No	String	6	v2+
licensees	**The licensees associated with the product.**	**No**	**Array [JSON Object]**		**v2+**
licenseeName	The name of the licensee. The name must come from the exclusiveLicensees list, the nonExclusiveLicensees list, or the institution name can be used if the institution itself is the licensee.	Yes	String	255	v2+
manufacturers	**The manufacturers for the manufacturing commercial product.**	**Yes**	**Array [JSON Object]**		**v2+**
manufacturerName	The name of the manufacturer.	Yes	String	255	v2+
productLocation	**The manufacturing production location(s).**	**Yes**	**Array [JSON Object]**		**v2+**
country	The manufacturing country for the location. Refer to Section 12.4 for a list of valid values.	No	String	30	v2+

JSON Attribute Name	Description	Required	Data Type	Length	Version
state	The manufacturing state for the location for applicable country. Refer to Section 12.14 for a list of valid values.	No	String	14	v2+
firstDate	The first date of manufacturing. Required if DOE is one of the funding agencies for the Invention Report this utilization is associated with. • Format: MM/DD/YYYY	Yes (Conditionally)	String	10	v2+
firstDateType	The type for the first date of manufacturing. Refer to 12.19 for a list of acceptable type values. Required if DOE is one of the funding agencies for the Invention Report this utilization is associated with.	Yes (Conditionally)	String	8	v2+
productQuantity	The total number of products at the manufacturing location. Required if DOE is one of the funding agencies for the Invention Report this utilization is associated with.	Yes (Conditionally)	Integer		v2+
commercialProds	**The FDA Approved Commercial products.**	**No**	**Array [JSON Object]**		**v2+**
commercialName	The name of the FDA approved commercial product.	Yes	String	80	v2+
fdaApprovalNumber	The number of the FDA approved commercial product.	No	String	20	v2+
fdaApprovalType	The type of the FDA approved commercial product. Please refer to Section 12.16 for a list of acceptable utilization Commercial Product Type values.	No	String	15	v2+
govtReviewStatus	The status of the FDA approved commercial product. Please refer to Section 12.17 for a list of acceptable utilization Government Review Status values.	No	String	10	v2+
publicInd	The public announced indicator flag if the FDA approved commercial product. Please refer to Section 12.18 for a list of acceptable utilization commercial product Public Announced values.	No	String	3	v2+

Table 9-2: utilizationRequest JSON Attributes

9.1.3   Response Parameters

When the request is processed and the utilization report is successfully created, the Create Utilization API endpoint returns an **utilizationResponse** data object. The attributes of this object are described in **Section 9.4.**

9.2   Update Utilization, v3

The Update Utilization API allows organization/agency to update an existing Utilization Report to an invention for utilization reporting year for both legacy questions prior 2023 and new questions for 2023 and beyond. Refer to Appendix C for samples of requests and responses.

9.2.1 Endpoint URI

This is an example of the endpoint for the Update Utilization resource.

POST	/iedison/api/{version}/utilizations/update version: [v2, v3]

9.2.2 Request Parameters

The request has the following elements:

- Headers: These are the request headers such as Accept or Content-Type. The Accept header defines the expected response format when the API returns the response. The Accept header is required for all requests.
- Body: The body contains the data that will be submitted as the POST request. When submitting a form, the format data and file content are sent in the body of the request.

The table below provides a description of the Update Utilization request header and body parameters that are expected by the iEdison API.

Request Parameter	Description	Required	Data Type	Version	In
accept	Specifies the response format that is expected. Set to "application/json".	Yes	String	v1+	header

Table 9-3: Update Utilization Request Parameters

The table below shows the parameters that will be included in the JSON body when updating a Utilization Report. The parameters are included as JSON object in JSON body. The JSON object represents the metadata of the Patent that needs to be updated.

The table below lists the attributes that will be included in the **utilizationRequest** parameter when creating an invention request. The attributes are included in the JSON object as part of the **utilizationRequest** form-data text element.

JSON Attribute Name	Description	Required	Data Type	Length	Version
inventionReportNumber	The Invention Report number the Utilization Report is associated with.	Yes	String	25	v2+
reportingYear	The year for which the Utilization Report is being submitted. Accepted values: • Enter up to 5 years back from the Date Invention Reported to Organization up to current Calendar year. For example, if inventionReportDate = 03/01/2016 and calendar year is	Yes	Integer	4	v2+

JSON Attribute Name	Description	Required	Data Type	Length	Version
	2024, the valid values are 2011 through 2024 (inclusive).				
latestStageDev	The latest stage of development of any product arising from this Invention. Refer to Section 12.1 for a list of latest valid values.	Yes	String	30	v2+
firstCommercialSaleYear	The year the product embodying the Invention was first sold (date of first commercial sale). Required if latestStageDev = "Commercialized". Accepted values: • Enter up to 5 years back from the Date Invention Reported to Organization up to current Calendar year. For example, if inventionReportDate = 03/01/2016 and calendar year is 2022, the valid values are 2011 through 2022 (inclusive).	Yes (Conditionally)	Integer		v2+
totalIncome	Total income from royalty or option agreements for the Invention. Required if latestStageDev = "Commercialized" or "Licensed".	Yes (Conditionally)	Number (float)		v2+
manufacturingWaiver	This is for "6. Did the grantee organization/contractor or any of the exclusive licensees request a waiver of the U.S. manufacturing requirements in the designated reporting period?". The value 1 should be used for "Yes" and 0 should be used for "No". This field is only used for utilization that has reporting fiscal year of 2022 and prior. If value is provided for utilization with reporting fiscal year of 2023 and after, the system will ignore this field.	No	Number		v1+
manufacturingWaiverTotal	This is for "7. If yes, how many such waivers were obtained?". This field is only used for utilization that has reporting fiscal year of 2022 and prior. If value is provided for utilization with reporting fiscal year	No	Number		v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
	of 2023 and after, the system will ignore this field.				
licensees	**The licensees associated with the invention.** **This object is only used if reportingYear is greater than or equal to 2024.**	**Yes (Conditionally)**	**Array [JSON Object]**		**v3**
licenseeName	The name of the licensee. The name must be unique.	Yes	String	255	v3
exclusiveCount	The number of exclusive licenses/option agreements that were active for the Invention in the designated reporting period.		Integer		v3
nonExclusiveCount	The number of non-exclusive licenses/option agreements that were active for the Invention in the designated reporting period.		Integer		v3
smallBusiness	The flag to indicate if the licensee is designated as small business.		Boolean		v3
exclusiveLicensesOptions	In the designated reporting period, how many exclusive licenses and/or options are active? • The number of exclusive licenses/option agreements for the Invention. • Required if latestStageDev = "Commercialized" or "Licensed". • **This is only valid if reportingYear = "2023".**	Yes (Conditionally)	Integer		v2 only
exclusiveLicensees	The exclusive licensee names for the invention. • Required if exclusiveLicensesOptions is greater than 0. **This is only valid if reportingYear = "2023".**	Yes (Conditionally)	Array [String]		v2 only
nonExclusiveLicensesOptions	In the designated reporting period, how many non-exclusive licenses and/or options are active? • The number of non-exclusive licenses/option agreements for the Invention. • Required if latestStageDev = "Commercialized" or "Licensed".	Yes (Conditionally)	Integer		v2+

JSON Attribute Name	Description	Required	Data Type	Length	Version
	• **This is only valid if reportingYear = "2023".**				
nonExclusiveLicensees	The non-exclusive licensee names for the invention. • Required if nonExclusiveLicensesOptions is greater than 0. **This is only valid if reportingYear = "2023".**	Yes (Conditionally)	Array [String]		v2 only
smallBusinessLicensesOptions	How many licenses and/or options of any type to small businesses (<500 employees) are active in the designated reporting period? • The number of small business licenses/option agreements for the Invention. • Required if latestStageDev = "Commercialized" or "Licensed". • **This is only valid if reportingYear = "2023".**	Yes (Conditionally)	Integer		v2 only

isUSManufacturingRequired1	• If latestStageDev = "Commercialized" or "Licensed".
	
	Other than U.S. Preference (35 U.S.C. 204), is the invention subject to any U.S. manufacturing requirements (e.g., U.S. Competitiveness provision, a U.S. Manufacturing DEC, etc.)?
	
	• Accepted values are:
	  o N = No
	  o Y = Yes
	
	• **This is only used if reportingYear is greater than or equal to 2023.**
		Yes (Conditionally)	String	1	v2+

isUSManufacturingRequired2	• If latestStageDev = "Commercialized" or "Licensed" • If isUSManufacturingRequired1 = Y Then, answer the following:	Yes (Conditionally)	String	3	v2+

JSON Attribute Name	Description	Required	Data Type	Length	Version
	In the designated reporting period, do all licenses include a requirement that any products embodying the subject invention or produced using the subject invention will be manufactured substantially in the United States (including manufacturing requirements other than 35 U.S.C. 204)? ○ Accepted values are: ■ N = No ■ Y = Yes • If isUSManufacturingRequired1 = N Then, answer the following: In the designated reporting period do all grants to any person of the exclusive right to use or sell the subject invention in the United States require that any products embodying the subject invention or produced using the subject invention will be manufactured substantially in the United States as required by 35 U.S.C. 204? ○ Accepted values are: ■ N = No ■ Y = Yes ■ N/A = Not Applicable Refer to Sections 12.21 and 12.22 for the question logic. **This is only used if reportingYear is greater than or equal to 2023.**				
isUSManufacturingRequired3	• If latestStageDev is "Commercialized" • If isUSManufacturingRequired1 = Y Then, answer the following:	Yes (Conditionally)	String	3	v2+

JSON Attribute Name	Description	Required	Data Type	Length	Version

	In the designated reporting period, are all products embodying the subject invention or produced using the subject invention manufactured substantially in the United States (including manufacturing requirements other than 35 U.S.C. 204)?
	
	o Accepted values are:
	    ▪ N = No
	    ▪ Y = Yes
	
	• If isUSManufacturingRequired1 = N
	
	Then, answer the following:
	
	In the designated reporting period are all products embodying the subject invention or produced using the subject invention manufactured substantially in the United States for all grants to any person of the exclusive right to use or sell the subject invention in the United States as required by 35 U.S.C. 204?
	
	o Accepted values are:
	    ▪ N = No
	    ▪ Y = Yes
	    ▪ N/A = Not Applicable
	
	Refer to Sections 12.21 and 12.22 for the question logic.
	
	This is only used if reportingYear is greater than or equal to 2023.				

notes	General notes • Required if commercializationPlanId = "3" or "6".	Yes (Conditionally)	String	1000	v2+
commercializationPlanId	What are your current commercialization plans for this invention?	Yes (Conditionally)	Number		v2+

JSON Attribute Name	Description	Required	Data Type	Length	Version
	• The commercialization plan for the invention. • Required if latestStageDev = "Not Licensed or Commercialized". Refer to Section 12.20 for a list of valid values.				
newUsJobs	The approximate number of new U.S.-based jobs created because of commercialization efforts during the reporting period. For DOE Invention only.	No	Integer		v2+
newUsCompanies	The number of new U.S.-based companies created from the commercialization efforts during the reporting period. For DOE Invention only.	No	Integer		v2+
manufacturingCommProds	**The manufacturing commercial products made using or Embodying the Subject Invention(s).**	**No**	**Array [JSON Object]**		**v2+**
productName	The unique commercial product name.	Yes	String	100	v2+
naicsCode	The North American Industry Classification System (NAICS) code is used by Federal agencies in classifying business establishments. For DOE invention only.	No	String	6	v2+
licensees	**The licensees associated with the product.**	**No**	**Array [JSON Object]**		**v2+**
licenseeName	The name of the licensee. The name must come from the exclusiveLicensees list, the nonExclusiveLicensees list, or the institution name can be used if the institution itself is the licensee.	Yes	String	255	v2+
manufacturers	**The manufacturers for the manufacturing commercial product.**	**Yes**	**Array [JSON Object]**		**v2+**
manufacturerName	The name of the manufacturer.	Yes	String	255	v2+
productLocation	**The manufacturing production location(s).**	**Yes**	**Array [JSON Object]**		**v2+**
country	The manufacturing country for the location. Refer to Section 12.4 for a list of valid values.	No	String	30	v2+

JSON Attribute Name	Description	Required	Data Type	Length	Version
state	The manufacturing state for the location for applicable country. Refer to Section 12.14 for a list of valid values.	No	String	14	v2+
firstDate	The first date of manufacturing. Required if DOE is one of the funding agencies for the Invention Report this utilization is associated with. • Format: MM/DD/YYYY	Yes (Conditionally)	String	10	v2+
firstDateType	The type for the first date of manufacturing. Refer to 12.19 for a list of acceptable type values. Required if DOE is one of the funding agencies for the Invention Report this utilization is associated with.	Yes (Conditionally)	String	8	v2+
productQuantity	The total number of products at the manufacturing location. Required if DOE is one of the funding agencies for the Invention Report this utilization is associated with.	Yes (Conditionally)	Integer		v2+
commercialProds	**The FDA Approved Commercial products for the utilization with fiscal year prior 2023.**	**No**	**Array [JSON Object]**		**v2+**
commercialName	The name of the FDA approved commercial product.	Yes	String	80	v2+
fdaApprovalNumber	The number of the FDA approved commercial product.	No	String	20	v2+
fdaApprovalType	The type of the FDA approved commercial product. Please refer to Section 12.16 for a list of acceptable utilization Commercial Product Type values.	No	String	15	v2+
govtReviewStatus	The status of the FDA approved commercial product. Please refer to Section 12.17 for a list of acceptable utilization Government Review Status values.	No	String	10	v2+
publicInd	The public announced indicator flag if the FDA approved commercial product. Please refer to Section 12.18 for a list of acceptable utilization commercial product Public Announced values.	No	String	3	v2+

Table 9-4: utilizationRequest JSON Attributes

9.2.3   Response Parameters

When the request is processed and the utilization report is successfully updated, the Update Utilization API endpoint returns an **utilizationResponse** data object. The attributes of this object are described in **Section 9.4.**

9.3   Search Utilization, v3

The Search Utilization API allows users to specify any combination of the attributes to search for existing Utilization Reports. The search criteria are applied using an "AND" operation across the various attributes specified in the JSON request. For example, if the utilization search request includes both the Invention Report Number and the Invention Report Year, the search results will include all entries that match both the Invention Report Number and the Invention Report Year. Refer to Appendix C for samples of requests and responses.

9.3.1   Endpoint URI

This is an example of the v2 endpoint for the Search Utilization resource.

POST	/iedison/api/{version}/utilizations/search version: [v2, v3]

9.3.2   Request Parameters

The request has the following elements:

- Headers: These are the request headers such as Accept or Content-Type. The Accept header defines the expected response format when the API returns the response. The Accept header is required for all requests.
- Body: The body contains the data that will be submitted as the POST request. When submitting a form, the format data and file content are sent in the body of the request.

The table below provides the explanation of the Search Utilization request header and body parameters that are expected by the iEdison API.

Request Parameter	Description	Data Type	Version	In
accept	Specifies the response format that is expected. Set to "application/json".	String	v2+	header

Table 9-5: Search Utilization Request Parameters

The table below shows the parameters that will be included in the JSON body only one time during the processing of Search Utilization Request.

The table below lists the attributes that will be included in the **utilizationSearchCriteria** parameter when searching for a Utilization Report. The attributes are included in the JSON object as part of the **utilizationSearchCriteria** form-data text element.

JSON Attribute Name	Description	Data Type	Length	Version
limit	The total number of records to be retrieved per page. This field must be a number. • Max Value = 100 • Default = 20	Integer		v2
offset	Indicates the page index. • Default = 0	Integer		v2
inventionReportNumber	The Invention Report Number filter to search for utilization.	String	25	v2
inventionDocketNumber	An internal reference number of the grantee/contractor organization to help track a reported Invention(s).	String	30	v2
grantContractNumber	The grant or contract number as specified by the agency. The format is defined by the agency.	String	50	v2
latestStageDev	The latest stage of development of any product arising from this Invention. Refer to Section 12.1 for a list of latest valid values.	String	30	v2
primaryAgency	The Primary Agency designated for each Invention Report in iEdison. Click here for a list of valid abbreviations.	String	50	v2
granteeOrganizationName	The name of the organization established at registration.	String	100	v2
titleElectionStatus	The Title Election Status the institution's decision regarding the election of title for this Invention. Refer to Section 12.15 for a list of valid values.	Array [String]	50	v2
inventionTitle	The title of the Invention as it appears in the grantee/contractors employee's Invention Report.	String	255	v2
inventionReportDateFrom	The From Date that the inventor disclosed the subject Invention in writing to the recipient institution. • Format: MM/DD/YYYY	String	10	v2
inventionReportDateTo	The To Date that the inventor disclosed the subject Invention in writing to the recipient institution. • Format: MM/DD/YYYY	String	10	v2
fiscalYear	The year for which the Utilization Report is being submitted.	Int	50	v2
commercialProductName	The name of the product that was developed.	String	80	v2
fdaApprovalNumber	FDA Approval Number	String	20	v2
fdaReportType	FDA Report Type			v2

JSON Attribute Name	Description	Data Type	Length	Version
lastUpdatedFrom	The 'start from' search date against the utilization last updated date. • Will use the last updated date for the invention, but if that is null, then the created date will be used. • Format: MM/DD/YYYY	String	10	v2
lastUpdatedTo	The 'up to' search date against the utilization last updated date. • Format: MM/DD/YYYY	String	10	v2

Table 9-6: utilizationSearchCriteria JSON Attributes

9.3.3   Response Parameters

When the request is processed, the Search Utilization API endpoint returns a utilization report that matches the search criteria in the **utilizationResponse** data object. The attributes of this object are described in **Section 9.4.**

Response Parameter	Description	Data Type	Version
totalRecords	The total number of records for the search.	Number	v2
limit	The limit entered by the user while making the request, i.e., the total number of records the user wished to retrieve per page	Integer	v2
offset	The page index specified by the user. • Default = 0 if user does not provide any offset in the request.	Integer	v2
utilizations	A list of utilizations which contains the utilizationResponse data object.9.4	Array [JSON Object]	v2

Table 9-7: utilizationSearchCriteria Response Parameters

9.4   utilizationResponse Data Object

The create, update, and search Utilization API shares the same **utilizationResponse** data object. The JSON attributes are described in the table below.

JSON Attribute Name	Description	Data Type	Version		
inventionReportNumber	Automatically generated by iEdison for an Invention Report after data has been submitted, checked for errors, and verified.	String	v2+		
granteeOrganizationName	The name of the organization established at registration.	String	v2+		
inventionTitle	The title of the Invention as it appears in the grantee/contractors employee's Invention Report.	String	v2+		
primaryAgency	The Primary Agency designated for each Invention Report in iEdison. Click here for a list of valid abbreviations.	String	v2+		

JSON Attribute Name	Description	Data Type	Version		
inventionReportDate	The date the inventor discloses the subject Invention in writing to the recipient institution.	String	v2+		
titleElectDate	The Invention Elect Title Date.	String	v2+		
reportingYear	The year for which the Utilization Report is being submitted.	Integer	v2+		
latestStageDev	The latest stage of development of any product arising from this Invention. Refer to Section 12.1 for a list of latest valid values.	String	v2+		
firstCommercialSaleYear	The year the product embodying the Invention was first sold (date of first commercial sale).	Integer	v2+		
totalIncome	The total income from royalty or option agreements for the Invention.	Integer	v2+		
manufacturingWaiver	This is for "6. Did the grantee organization/contractor or any of the exclusive licensees request a waiver of the U.S. manufacturing requirements in the designated reporting period?". The value 1 should be used for "Yes" and 0 should be used for "No". This field is only used for utilization that has reporting fiscal year of 2022 and prior. If value is provided for utilization with reporting fiscal year of 2023 and after, the system will ignore this field.	Number	V1+		
manufacturingWaiverTotal	This is for "7. If yes, how many such waivers were obtained?". This field is only used for utilization that has reporting fiscal year of 2022 and prior. If value is provided for utilization with reporting fiscal year of 2023 and after, the system will ignore this field.	Number	V1+		
exclusiveLicensesOptions	The number of exclusive licenses/option agreements for the Invention.	Integer	v2+		
nonExclusiveLicensesOptions	The number of non-exclusive licenses/option agreements for the Invention.	Integer	v2+		
smallBusinessLicensesOptions	The number of small business licenses/option agreements for the Invention. **Note**: If a value was entered in the request, it will not be updated regardless of how the licensee information is entered.	Integer	v2+		
isUSManufacturingRequired1	Other than U.S. Preference (35 U.S.C. 204), is the invention subject to any U.S. manufacturing requirements (e.g., U.S. Competitiveness provision, a U.S. Manufacturing DEC, etc.)? • N = No • Y = Yes Refer to Sections 12.21 and 12.22 for a diagram of the question logic.	String	v2+		
isUSManufacturingRequired2	• If latestStageDev = "Licensed" and isUSManufacturingRequired1 = Y,	String	v2+		

JSON Attribute Name	Description	Data Type	Version		
	Then, In the designated reporting period, do all licenses include a requirement that any products embodying the subject invention or produced using the subject invention will be manufactured substantially in the United States (including manufacturing requirements other than 35 U.S.C. 204)? Accepted values are: o N = No o Y = Yes • If latestStageDev = "Licensed" and isUSManufacturingRequired1 = N, Then, In the designated reporting period do all grants to any person of the exclusive right to use or sell the subject invention in the United States require that any products embodying the subject invention or produced using the subject invention will be manufactured substantially in the United States as required by 35 U.S.C. 204? Accepted values are: o N = No o Y = Yes o N/A = Not Applicable Refer Sections 12.21 and 12.22 for a diagram of the question logic.				
isUSManufacturingRequired3	• If latestStageDev = "Commercialized" and isUSManufacturingRequired1 = Y, Then, In the designated reporting period, are all products embodying the subject invention or produced using the subject invention manufactured substantially in the United States (including manufacturing requirements other than 35 U.S.C. 204)? Accepted values are: o N = No	String	v2+		

JSON Attribute Name	Description	Data Type	Version		
	○ Y = Yes • If latestStageDev = "Commercialized" and isUSManufacturingRequired1 = N, Then, In the designated reporting period are all products embodying the subject invention or produced using the subject invention manufactured substantially in the United States for all grants to any person of the exclusive right to use or sell the subject invention in the United States as required by 35 U.S.C. 204? Accepted values are: ○ N = No ○ Y = Yes ○ N/A = Not Applicable Refer to Sections 12.21 and 12.22 for a diagram of the question logic.				
notes	General notes	String	v2+		
commercializationPlanId	What are your current commercialization plans for this invention? • The commercialization plan for the invention. • Refer to Section 12.20 for a list of valid commercialization plans.	Number	v2+		
exclusiveLicensees	The exclusive licensee names for the invention.	Array [String]	v2 only		
nonExclusiveLicensees	The non-exclusive licensee names for the invention.	Array [String]	v2 only		
newUsJobs	• For DOE Inventions only. The approximate number of new U.S.-based jobs created because of commercialization efforts during the reporting period.	Integer	v2+		
newUsCompanies	• For DOE Inventions only. The number of new U.S.-based companies created from the commercialization efforts during the reporting period.	Integer	v2+		
manufacturingCommProds	**The manufacturing commercial products made using or Embodying the Subject Invention(s). Object attributes below.**	**Array [JSON Object]**	**v2+**		
id	The unique identifier for the manufacturing commercial product record	Integer	v3+		

JSON Attribute Name	Description	Data Type	Version		
productName	The unique commercial product name.	String	v2+		
naicsCode	• For DOE inventions only. The North American Industry Classification System (NAICS) code is used by Federal agencies in classifying business establishments.	String	v2+		
licensees	**The licensees associated with the product.**	**Array [JSON Object]**	**v2+**		
licenseeName	The name of the licensee. The name must come from the exclusiveLicensees list, the nonExclusiveLicensees list, or the institution name can be used if the institution itself is the licensee.	String	v2+		
manufacturers	**The manufacturers for the manufacturing commercial product.**	**Array [JSON Object]**	**v2+**		
id	The unique identifier for the manufacturer	Integer	v3+		
manufacturerName	The name of the manufacturer	String	v2+		
productLocation	**The manufacturing production location(s). Object attributes below.**	**Array [JSON Object]**	**v2+**		
id	The unique identifier for the manufacturing production location record.	Integer	v3+		
country	The manufacturing country for the location. Refer to Section 12.4 for a list of valid values.	String	v2+		
state	The manufacturing state for the location for applicable country. Refer to Section 12.14 for a list of valid values.	String	v2+		
firstDate	The first date of manufacturing.	String	v2+		
firstDateType	The type for the first date of manufacturing. Please refer to Section 12.19 for a list of valid values.	String	v2+		
productQuantity	The total number of products at the manufacturing location.	Integer	v2+		
commercialProds	**The FDA Approved Commercial products. Object Attributes are below.**	**Array [JSON Object]**	**v2+**		
id	The unique identifier for the FDA Approved Commercial Product record.	Integer	v3+		
commercialName	The name of the FDA approved commercial product.	String	v2+		
fdaApprovalNumber	The number of the FDA approved commercial product.	String	v2+		
fdaApprovalType	The type of the FDA approved commercial product. Please refer to Section 12.16 for a list of utilization Commercial Product Type values.	String	v2+		
govtReviewStatus	The status of the FDA approved commercial product. Please refer to Section 12.17 for a list of utilization Government Review Status values.	String	v2+		

JSON Attribute Name	Description	Data Type	Version		
publicInd	The public announced indicator flag of the FDA approved commercial product. Please refer to Section 12.18 for a list of utilization commercial product Public Announced values.	String	v2+		
licensees	**The licensees associated with the invention.**	**Array [JSON Object]**	**v3**		
id	The ID number associated with the licensee.	String	v3		
licenseeName	The name of the licensee.	String	v3		
exclusiveCount	The number of exclusive licenses/option agreements that were active for the Invention in the designated reporting period.	String	v3		
nonExclusiveCount	The number of non-exclusive licenses/option agreements that were active for the Invention in the designated reporting period.	String	v3		
smallBusiness	Indicates if a licensee is designated as small business. Values are: • true = Is a small business • false = Is not a small business	Boolean	v3		
createdDate	The date the utilization record was created.	String	v2+		
updatedDate	The date the utilization record was last updated.	String	v2+		

Table 9-8: utilizationResponse JSON Attributes

10 Document API Reference

The document APIs provide ways to search for a disclosure document, Confirmatory License, Government Support Clause, and other document types from the inventions and patents; or download a specific document.

The latest version of the Search Document and Download Document API, Version 2 (v2) contains the following changes:

• Renamed attribute 'patentDocketNum' to 'patentDocketNumber' in document response data object.

10.1 Search Document

Search condition for documents is the combination of attributes of the **searchDocumentCriteria** JSON object. The system will only return documents that are granted access permission to the user's organization. Refer to Appendix D for samples of requests and responses.

10.1.1 Endpoint URI

This is an example of the endpoint for the Search Documents resource.

POST	/iedison/api/v2/documents/search

10.1.2 Request Parameters

The request has the following elements:

- Headers: These are the request headers such as Accept or Content-Type. The Accept header defines the expected response format when the API returns the response. The Accept header is required for all requests.
- Body: The body contains the data that will be submitted as the POST request. When submitting a form, the format data and file content are sent in the body of the request.

The table below provides the explanation of the Search Document request header and body parameters that are expected by the iEdison API.

Request Parameter	Description	Required	Data Type	Version	In
accept	Specifies the response format that is expected. Set to "application/json".	Yes	String	v1+	header
documentSearchCriteria	The JSON object that contains attributes used in the request. Refer to the table below for a description of the attributes.	Yes	String	v1+	form-data

Table 10-1: Search Document Request Parameters

The table below lists the attributes that will be included in the **searchDocumentCriteria** parameter when searching for a document. The attributes are included in the JSON object as part of the **searchDocumentCriteria** form-data text element.

JSON Attribute Name	Description	Required	Data Type	Length	Version
inventionReportNumber	Automatically generated by iEdison for an Invention Report after data has been submitted, checked for errors, and verified.	No	String	100	v1+
inventionDocketNumber	An internal reference number of the grantee/contractor organization to help track a reported Invention(s).	No	String	30	v1+
patentDocketNumber	The Patent Docket Number is an internal reference number of the grantee/contractor organization to help track a reported Patent(s).	No	String	30	v1+
primaryAgency	The Primary Agency designated for each Invention Report in iEdison. Click here for a list of valid abbreviations.	No	String	30	v1+
granteeOrganizationName	The name of the organization established at registration.	No	String	100	v1+
titleElectionStatus	The status of the title to rights in the reported Invention. Refer to Section 12.15 for a list of valid values.	No	String	80	v1+
inventionTitle	The title of the Invention as it appears in the grantee/contractors employee's Invention Report.	No	String	255	v1+
inventionReportDateFrom	The From Date that the inventor disclosed in the	No	String	10	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
	subject Invention in writing to the recipient institution. • Format: MM/DD/YYYY				
inventionReportDateTo	The To Date that the inventor disclosed in the subject Invention in writing to the recipient institution. • Format: MM/DD/YYYY	No	String	10	v1+
patentFilingDateFrom	The 'starting from' search date against the PCT, Provisional, Non-Provisional Patent application filing date. • Format: MM/DD/YYYY	No	String	10	v1+
patentFilingDateTo	The 'up to' search date against the PCT, Provisional, Non-Provisional Patent application filing date. • Format: MM/DD/YYYY	No	String	10	v1+
patentApplicationType	Patent Application Type of a record. Refer to Section 12.10 for a list of valid values.	No	String	25	v1+
patentStatus	Indicates the status of the Patent. Refer to Section 12.13 for a list of valid values.	No	String	50	v1+
patentTitle	The exact title of the U.S. Patent or Patent application as submitted by the Institution to iEdison or to the USPTO.	No	String	50	v1+
grantContractNumber	The grant or contract number as specified by the agency. The format is defined by the agency.	No	String	50	v1+
inventorFirstName	The first name of the inventor.	No	String	50	v1+
inventorLastName	The last name of the inventor.	No	String	50	v1+
lastUpdatedFrom	Search the "From Date" of the document last updated date. This will use the last updated date for the invention, but if that is null, then the created date will be used. • Format: MM/DD/YYYY	No	String	10	v1+
lastUpdatedTo	Search the "To Date" of the document last updated date. • Format: MM/DD/YYYY	No	String	10	v1+

JSON Attribute Name	Description	Required	Data Type	Length	Version
lastUpdatedDate	Document last updated date. • Format: MM/DD/YYYY	No	String	10	v1+
documentType	The document type name for the invention and patent. Refer to Section 12.23 for a list of valid values.	No	String	60	v2
limit	Total number of records to be retrieved per page. This field must be a number. • Max Value = 100 • Default = 20	No	Integer		v1+
offset	Indicates the page index. • Default = 0	No	Integer		v1+

Table 10-2: searchDocumentCriteria JSON Attributes

10.1.3 Response Parameters

This section contains response examples for searching for documents.

Response Parameter	Description	Data Type	Version
totalRecords	Total number of records for the search.	Number	v1+
limit	The limit used in the request	Integer	v1+
offset	The offset used in the request	Integer	v1+
documentsList	A list of document response Objects. Refer to Section 10.1.4 for a description of the attributes.	Array [JSON Object]	v1+

Table 10-3: Search Document Response Parameters

10.1.4 Document Response Data Object

The JSON attributes are described in the table below.

JSON Attribute Name	Description	Data Type	Version
inventionReportNumber	A system generated sequence number used for ID of the Patent.	String	v1+
patentDocketNum	The Patent Docket Number is an internal reference number of the grantee/contractor organization to help track a reported Patent(s). This is supported in v1 endpoint only. This field is no longer supported in document v2 APIs.	String	v1
patentDocketNumber	The Patent Docket Number is an internal reference number of the grantee/contractor organization to help track a reported Patent(s).	String	v2
documentType	The unique identifier for document category types.	Number	v1+
documentTypeName	The name of document category types.	String	v1+
documentID	The unique identifier.	String	v1+
fileName	The name of the download file.	String	v1+
documentCreateDate	The date the document was created.	String	v1+

JSON Attribute Name	Description	Data Type	Version
documentUpdateDate	The date the document was last update.	String	v1+

Table 10-4: Document Response JSON Attributes

10.2 Download Document

The Download Document API requires a Document ID. This information is available by performing a document search which returns one or multiple records. Each returned document will have its own document ID. Refer to Appendix D for samples of requests and responses.

10.2.1 Endpoint URI

This is an example of the endpoint for the Download Document resource.

POST	/iedison/api/v2/documents/download

10.2.2 Request Parameters

The request has the following elements:

- Headers: These are the request headers such as Accept or Content-Type. The Accept header defines the expected response format when the API returns the response. The Accept header is required for all requests.
- Body: The body contains the data that will be submitted as the POST request. When submitting a form, the format data and file content are sent in the body of the request.

The table below provides the explanation of the Download Document request header and body parameters that are expected by the iEdison API.

Request Parameter	Description	Required	Data Type	Version	In
accept	Set to */*	Yes	String	v1+	header
document	The document JSON objects containing fields to be used in the search download file. Refer to the table below for a description of the attributes.	Yes	String	v1+	form-data

Table 10-5: Download Document Request Parameters

The table below lists the attributes that will be included in the **document** parameter when downloading a document. The attributes are included in the JSON object as part of the **document** form-data text element.

JSON Attribute Name	Description	Required	Data Type	Length	Version
documentID	The unique document identifier.	Yes	Number		v1+

Table 10-6: document JSON Attributes

10.2.3 Response Parameters

Based on the request parameters, the Download Document API provides the below response parameters.

Response Parameter	Description	Data Type	Version
file	The document file content in stream.	application/octet-stream	v1+

Table 10-7: Download Document Response Parameters

11 Notification API Reference

The Notification API provide ways to search for a list of pending notifications. Search condition for notifications is the combination of attributes of the n**otificationSearchCriteria** JSON object. The system will only return pending notifications which granted access permission to the user's organization. Refer to Appendix E for samples of requests and responses.

11.1 Endpoint URI

This is an example of the endpoint for the Notification resource.

POST	/iedison/api/v1/notifications/search

11.2 Request Parameters

The request has the following elements:

- Headers: These are the request headers such as Accept or Content-Type. The Accept header defines the expected response format when the API returns the response. The Accept header is required for all requests.
- Body: The body contains the data that will be submitted as the POST request. When submitting a form, the format data and file content are sent in the body of the request.

The table below provides the explanation of the Notification request header and body parameters that are expected by the iEdison API.

Request Parameter	Description	Required	Data Type	Version	In
accept	Specifies the response format that is expected. Set to "application/json".	Yes	String	v1	header
notificationSearchCriteria	The notificationSearchCriteria JSON objects containing fields to be used in the search. Refer to the table below for a description of the attributes.	Yes	String	v1	form-data

Table 11-1: Notification Request Parameters

The table below lists the attributes that will be included in the **notificationSearchCriteria** parameter when searching for a notification. The attributes are included in the JSON object as part of the **notificationSearchCriteria** form-data text element.

JSON Attribute Name	Description	Required	Data Type	Length	Version
inventionReportNumber	Automatically generated by iEdison for an Invention Report after data has been submitted, checked for errors, and verified.	No	String	100	v1
patentDocketNumber	The Patent Docket Number is an internal reference number of the grantee/contractor organization to help track a reported Patent(s).	No	String	30	v1
messageNumber	Search for the "MessageNumber" of a pending notification	No	Integer	4	v1
fiscalYear	Search for the "FiscalYear" of a pending notification, • Format: 4-digit "YYYY"	No	Integer	4	v1
postedDateFrom	Search the "From Date" of a notification posting date. • Format: MM/DD/YYYY	No	String	10	v1
postedDateTo	Search the "To Date" of a notification posting date. • Format: MM/DD/YYYY	No	String	10	v1
dueDateFrom	Search the "From Date" of a notification due date. • Format: MM/DD/YYYY	No	String	10	v1
dueDateTo	Search the "To Date" of a notification due date. • Format: MM/DD/YYYY	No	String	10	v1
limit	Total number of records to be retrieved per page. This field must be a number. • Max Value = 100 • Default = 20	No	Integer		v1
offset	Indicates the page index. • Default = 0	No	Integer		v1

Table 11-2: notificationSearchCriteria JSON Attributes

11.3 Response Parameters

Based on the request parameters, the Notification API provides the below response parameters.

Response Parameter	Description	Data Type	Version
totalRecords	The total number of records for the search.	Number	v1
limit	The limit used in the request.	Integer	v1
offset	The offset used in the request.	Integer	v1
notifications	A list of notification response objects.	Array [JSON Object]	v1

Table 11-3: Notification Response Parameters

11.4 notificationResponse Data Object

The Utilization create, update, and search API endpoints return a common **utilizationReponse** data object. The JSON attributes are described in the table below.

Response Parameter	Description	Data Type	Version
inventionReportNumber	System generated sequence number used for ID of the Patent.	String	v1
patentDocketNumber	The Patent Docket Number is an internal reference number of the grantee/contractor organization to help track a reported Patent(s).	String	v1
messageNumber	The Message Number of the notification.	Number	v1
messageDescription	The Message Description of the notification.		
organization	The recipient organization of the notification. It can be either be a federal agency or a grant contractor	String	v1
fiscalYear	The Fiscal Year of the notification.	Number	V1
status	The Status (Active/Inactive) of the notification.	String	V1
postedDate	The date the notification was posted.	String	v1
dueDate	The Due Date of the notification.	String	v1

Table 11-4: notificationResponse JSON Attributes

12 Lookup Values

The tables below contain lookup values used in the API.

12.1 Agency Mapping List

Click here to see list of all iEdison enrolled agencies. Be advised that the API cannot be used for agencies that have the following red notice "**THIS AGENCY IS CURRENTLY INACTIVE IN IEDISON**"

12.2 Agreement Types

List of available Agreement Types

Value
Cooperative Agreement
Grant
Contract
ACT = DoE Specific
Other Funding Agreement

12.3 Award Type

List of the Invention funding agreement Award types

Value
Prime Award
Sub-Award

12.4 Country List

A list of valid country Names and FIPs Country Codes.

Name	FIPs Country Codes
AFGHANISTAN	AF
African Manufacturer Intellectual Property Organization	OAPI
African Regional Manufacturer Intellectual Property Organization	ARIPO
ALBANIA	AL
ALGERIA	AG
ANDORRA	AN
ANGOLA	AO
ANGUILLA	AV
ANTIGUA/BARBUD	AC
ARGENTINA	AR
ARMENIA	AM
ARUBA	AA
AUSTRALIA	AS
AUSTRIA	AU
AZERBAIJAN	AJ
BAHAMAS	BF
BAHRAIN	BA
BANGLADESH	BG
BARBADOS	BB
BELARUS	BO
BELGIUM	BE
BELIZE	BH
BENIN	BN
BERMUDA	BD
BHUTAN	BT
BOLIVIA	BL
BOSNIA/HERZEG	BK
BOTSWANA	BC
BRAZIL	BR

Name	FIPs Country Codes
BRITISH VI ISS	VI
BRUNEI	BX
BULGARIA	BU
BURKINA	UV
BURUNDI	BY
CABO VERDE	CV
CAMBODIA	CB
CAMEROON	CM
CANADA	CA
CAYMAN ISLANDS	CJ
CENTRAL AFR R	CT
CHAD	CD
CHILE	CI
CHINA	CH
COLOMBIA	CO
COMOROS	CN
CONGO	CF
CONGO DEM REP	CG
COSTA RICA	CS
COTE D'IVOIRE	IV
CROATIA	HR
CUBA	CU
CYPRUS	CY
CZECH REPUBLIC	EZ
DENMARK	DA
DJIBOUTI	DJ
DOMINICA	DO
DOMINICAN REP	DR
ECUADOR	EC
EGYPT	EG
EL SALVADOR	ES
EQUATOR GUINEA	EK
ERITREA	ER
ESTONIA	EN
ESWATINI	WZ
ETHIOPIA	ET
Eurasian Patent Organization	EAPO
European Patent Organization	EPO
FALKLAND ISS	FX

Name	FIPs Country Codes
FIJI	FJ
FINLAND	FI
FRANCE	FR
FRENCH POLYNES	FP
GABON	GB
GAMBIA	GA
GAZA STRIP	GZ
GEORGIA	GG
GERMANY	GM
GHANA	GH
GIBRALTAR	GI
GREECE	GR
GREENLAND	GL
GRENADA	GJ
GUATEMALA	GT
GUERNSEY	GK
GUINEA	GV
GUINEA-BISSAU	PU
GUYANA	GY
HAITI	HA
HONDURAS	HO
HONG KONG	HK
HUNGARY	HU
ICELAND	IC
INDIA	IN
INDONESIA	ID
IRAN	IR
IRAQ	IZ
IRELAND	EI
ISRAEL	IS
ITALY	IT
JAMAICA	JM
JAPAN	JA
JERSEY	JE
JORDAN	JO
KAZAKHSTAN	KZ
KENYA	KE
KIRIBATI	KR
KOREA PEO REP	KN

Name	FIPs Country Codes
KOREA REP OF	KS
KOSOVO	KV
KUWAIT	KU
KYRGYZSTAN	KG
LAOS	LA
LATVIA	LG
LEBANON	LE
LESOTHO	LT
LIBERIA	LI
LIBYA	LY
LIECHTENSTEIN	LS
LITHUANIA	LH
LUXEMBOURG	LU
MACAU	MC
MADAGASCAR	MA
MALAWI	MI
MALAYSIA	MY
MALDIVES	MV
MALI	ML
MALTA	MT
MAURITANIA	MR
MAURITIUS	MP
MEXICO	MX
MOLDOVA	MD
MONACO	MN
MONGOLIA	MG
MONTENEGRO	MW
MONTSERRAT	MH
MOROCCO	MO
MOZAMBIQUE	MZ
MYANMAR	BM
NAMIBIA	WA
NAURU	NR
NEPAL	NP
NETHERLANDS	NL
NEW ZEALAND	NZ
NICARAGUA	NU
NIGER	NG
NIGERIA	NI

Name	FIPs Country Codes
NORTH MACEDONIA	MK
NORWAY	NO
OMAN	MU
PAKISTAN	PK
PANAMA	PM
PAPUA N GUINEA	PP
PARAGUAY	PA
Patent Office of the Cooperation Council for the Arab States of the Gulf	GCCPO
PERU	PE
PHILIPPINES	RP
POLAND	PL
PORTUGAL	PO
QATAR	QA
ROMANIA	RO
RUSSIA	RS
RWANDA	RW
SAMOA	WS
SAN MARINO	SM
SAO TOME/PRINC	TP
SAUDI ARABIA	SA
SENEGAL	SG
SERBIA	SR
SEYCHELLES	SE
SIERRA LEONE	SL
SINGAPORE	SN
SLOVAKIA	LO
SLOVENIA	SI
SOLOMON ISS	BP
SOMALIA	SO
SOUTH AFRICA	SF
SOUTH SUDAN	SS
SPAIN	SP
SRI LANKA	CE
ST HELENA	SH
ST KITTS/NEVIS	SC
ST LUCIA	ST
ST VINCENT/GRN	VC
SUDAN	SU

Name	FIPs Country Codes
SURINAME	NS
SWEDEN	SW
SWITZERLAND	SZ
SYRIA	SY
TAIWAN	TW
TAJIKISTAN	TI
TANZANIA U REP	TZ
THAILAND	TH
TIMOR-LESTE	TT
TOGO	TO
TONGA	TN
TRINIDAD/TOBA	TD
TUNISIA	TS
TURKEY	TU
TURKMENISTAN	TX
TURKS/CAICOS I	TK
TUVALU	TV
UGANDA	UG
UKRAINE	UP
Unified Patent Court	UPC
UNITED ARAB EM	TC
UNITED KINGDOM	UK
UNITED STATES	US
URUGUAY	UY
UZBEKISTAN	UZ
VANUATU	NH
VENEZUELA	VE
VIETNAM	VM
WEST BANK	WE
YEMEN	YM
YUGOSLAVIA	YO
ZAMBIA	ZA
ZIMBABWE	ZI

12.5 Invention Development Stage

List of available Invention Development Stages

Value
Commercialized
Licensed

Value
Not Licensed

12.6 Invention Disposition

The decision of the agency as to how to proceed with the technology. This field will be auto populated or set by the Primary Agency. It will be populated automatically to

- "Barred" if a Patent is not filed within one year of the "Date of the First Publication/Sale/Public Use" or as "Void,"
- "Transferred/Assigned" after a request is granted.

Otherwise, the Disposition Status will be set by the Primary Agency in response to the selection of "Does Not Retain Title."

Value	Notes
Government Does Not Retain Rights	Active status to allow for agency clients to use in the request only. Organization can only view this in response data.
Government Retains Rights	Active status to allow for agency clients to use in the request only. Organization can only view this in response data.
Not Elect Title – Waive to Government	Non-Active status for response data view only. This shall not be used in the request for create or update.
Not Elect Title – Waive to Third Party	Non-Active status for response data view only. This shall not be used in the request for create or update.
Request for Inventor Waiver	Non-Active status for response data view only. This shall not be used in the request for create or update.
Assignment Approved	Non-Active status for response data view only. This shall not be used in the request for create or update.
Assignment Denied	Non-Active status for response data view only. This shall not be used in the request for create or update.
Barred	Active status to allow system to automatically set the Barred status. This status is used in response data only. This value shall not be used in API create or update request.
Voided	Active status value. Primary Agency can update the disposition status to Voided with API update request only. Title Election Status will change to Voided when Disposition Status is updated to Voided.
Transferred	Active status value. But it cannot be used in API create or update request. Response data for Organization. This will be set automatically when the Primary Agency approves the request. **Note**: Transferred status is for response data only. Updating an Invention to transfer status must go through Web Application Interface.

12.7 Invention Does Not Retain Title Reason

The Invention Does Not Retain Title Reason values must be provided when the Title Election Status is set to "Does Not Retain Title".

Value
Low Commercial Potential
Non-Patentable (Not Novel)
Non-Patentable (Not Useful)
Non-Patentable (Obvious)
Did Not Yield Expected Results
Budget Limitation
Immature Market
Other

12.8 Inventor US Federal Employee

Is inventor a federal employee?

Value
true
false

12.9 Patent Filing Status

List of available Patent filing status

Value
Active
Expired
Abandoned

12.10 Patent Action Document Type

The iEdison Patent Action Document Type.

Value	Notes
CL	Confirmatory License
SC	Government Support Clause

12.11 Patent Action Type

The iEdison Patent Action Type.

Value	Notes
A	Accept
R	Reject

12.12 Patent Application Types

List of available Patent Application Types

Patent Application Type	Description	Notes
CIP	Continuation-In-Part	Active Patent application type. This can be used in the Patent create and update API requests.
CON	Continuation	Active Patent application type. This can be used in the Patent create and update API requests.
CPA	Continued Prosecution Application	Non-Active Patent application type. This can NOT be used in the Patent create and update API requests.
DIV	Divisional	Active Patent application type. This can be used in the Patent create and update API requests.
FWC	File Wrapper Continuing	Non-Active Patent application type. This can NOT be used in the Patent create and update API requests.
ORD	Ordinary Utility	Active Patent application type. This can be used in the Patent create and update API requests.
PROV	Provisional	Active Patent application type. This can be used in the Patent create and update API requests.
PVP	Plant Variety Protection	Active Patent application type. This can be used in the Patent create and update API requests.
RCE	Request for Continued Examination	Non-Active Patent application type. This can NOT be used in the Patent create and update API requests.
PCT	PCT Designating the US	Active Patent application type. This can be used in the Patent create and update API requests.

12.13 Patent Status

The iEdison Patent status list of value.

Value	Notes
Transferred/Assigned	This status value shall not be used in API request. Organization needs to use the UI to submit a Transfer Patent Request.
Voided	This status value shall not be used in API request. Organization needs to use the UI to submit a Void Patent Request.
Expired	This status value shall be used for the Patent Application Types of DIV, ORD, PVP, CIP, and CON
Abandoned/Intent to Abandon	This value can be used for both organization and agency clients in the Patent request
Institution Retains Rights	This value can be used for both organization and agency clients in the Patent request

12.14 States List

The 2-letter code for U.S. states and territories. For use contractorState and Utilization Manufacturing locations. Use the appropriate '**Code'** for in the request.

Name	Code
ALABAMA	AL
ALASKA	AK
ALBERTA	AB
AMERICAN SAMOA	AS
AP0/FP0 EUROPE	AE
AP0/FP0 OT PAC	AP
AP0/FP0 S AMER	AA
ARIZONA	AZ
ARKANSAS	AR
BAKER ISLAND	FQ
BR. COLUMBIA	BC
CALIFORNIA	CA
COLORADO	CO
CONNECTICUT	CT
DELAWARE	DE
DIST OF COL	DC
FED MICRONESIA	FM
FLORIDA	FL
GEORGIA	GA
GUAM	GU
HAWAII	HI
HOWARD ISLAND	HQ
IDAHO	ID
ILLINOIS	IL
INDIANA	IN
IOWA	IA
JOHNSTON ATOLL	JQ
KANSAS	KS
KENTUCKY	KY
KINGMAN REEF	KQ
LOUISIANA	LA
MAINE	ME
MANITOBA	MB
MARSHALL IS	MH
MARYLAND	MD
MASSACHUSETTS	MA
MICHIGAN	MI
MIDWAY ISLANDS	MQ
MINNESOTA	MN
MISSISSIPPI	MS
MISSOURI	MO

Name	Code
MONTANA	MT
NAVASSA ISLAND	BQ
NEBRASKA	NE
NEVADA	NV
NEW BRUNSWICK	NB
NEW HAMPSHIRE	NH
NEW JERSEY	NJ
NEW MEXICO	NM
NEW YORK	NY
NEWFOUNDLAND	NL
NORTH CAROLINA	NC
NORTH DAKOTA	ND
NORTHN MARIANA	MP
NOVA SCOTIA	NS
NW TERRITORIES	NT
OHIO	OH
OKLAHOMA	OK
ONTARIO	ON
OREGON	OR
PALAU	PW
PALMYRA ATOLL	LQ
PENNSYLVANIA	PA
PR. EDWARD ISL	PE
PUERTO RICO	PR
QUEBEC	PQ
QUEBEC	QC
RHODE ISLAND	RI
SASKATCHEWAN	SK
SOUTH CAROLINA	SC
SOUTH DAKOTA	SD
TENNESSEE	TN
TEXAS	TX
TRUST TER PACF	PS
US MINOR OUTLY	UM
UTAH	UT
VERMONT	VT
VIRGIN ISLANDS	VI
VIRGINIA	VA
WAKE ISLAND	WQ
WASHINGTON	WA
WEST VIRGINIA	WV
WISCONSIN	WI
WYOMING	WY
YUKON	YT

12.15 Title Election Status

The decision of the institution regarding the election of title for this Invention.

- The 'Draft' 'Voided', and 'Transferred' status values shall not be used when submitting Invention Create or Update API requests.
- 'Only Elect to Retain Title' and 'Does Not Retain Title' status will be allowed when submitting Invention Create Requests.
- 'Designated as Unpatented Biological Material or Research Tool' status is not available for DOE

Value	Notes
Elect to Retain Title	This can be used for both organization and agency clients in the create or update request.
Does Not Retain Title	This can be used for both organization and agency clients in the create or update Invention request. Once the Invention is saved with this status, organization client will no longer allow to modify the Invention metadata.
Designated as Unpatented Biological Material or Research Tool	This can be used for both organization and agency clients in the update request.
Under Evaluation	Allow both organization and agency clients to use in the update request.
Draft	This status is used in response data only. This status value shall not be used in API create or update request.
Voided	This status is used in response data only. This status value shall not be used in API request. The organization is required to use the UI to submit an Invention Void Request.
Transferred	This status is use in response data only. This status value shall not be used in API request. The organization is required to use the UI to submit an Invention Transfer Request.
Government Takes Title (Award Terms)	If an invention is created by a large for-profit private organization that receives funding from the Department of Energy (DOE), and a DOE Waiver ID has not been issued, the iEdison system will automatically set the status to "Not Waived." Users and administrators from the DOE and the National Nuclear Security Administration (NNSA) can update this status using the Restful API Services. For all other agencies, updates can only be made through the nightly job.

12.16 Utilization Commercial Product Type

Value
Biologic
Medical Device
Drug

12.17 Utilization Commercial Product Government Review Status

Value
Approved
Rejected
Pending

12.18 Utilization Public Announced

Value
Yes
No

12.19 Utilization Manufacturing Location First Date Type

Value
Actual
Expected

12.20 Utilization Commercialization Plan

Value	Notes
1	Seeking additional funding to further develop this invention
2	Marketing and/or furthering development of this invention to attract commercial partners
3	Developing and/or using this invention for internal purposes only
4	Developing and/or preparing this invention with intent to commercialize ourselves
5	Making available for distribution and/or licensing for research purposes only
6	No current commercialization plan

12.21 Licensed Utilization Question Logic for US Manufacturing

This section shows the dynamic question flow if the lastestStageDev = "Licensed" for Questions 8 and 9. The answer to Question 8 will determine which variation of Question 9 should be answered.

Question 8 is for the attribute USManufacturingRequired1. Question 9 is for the attribute isUSManufacturingRequired2.
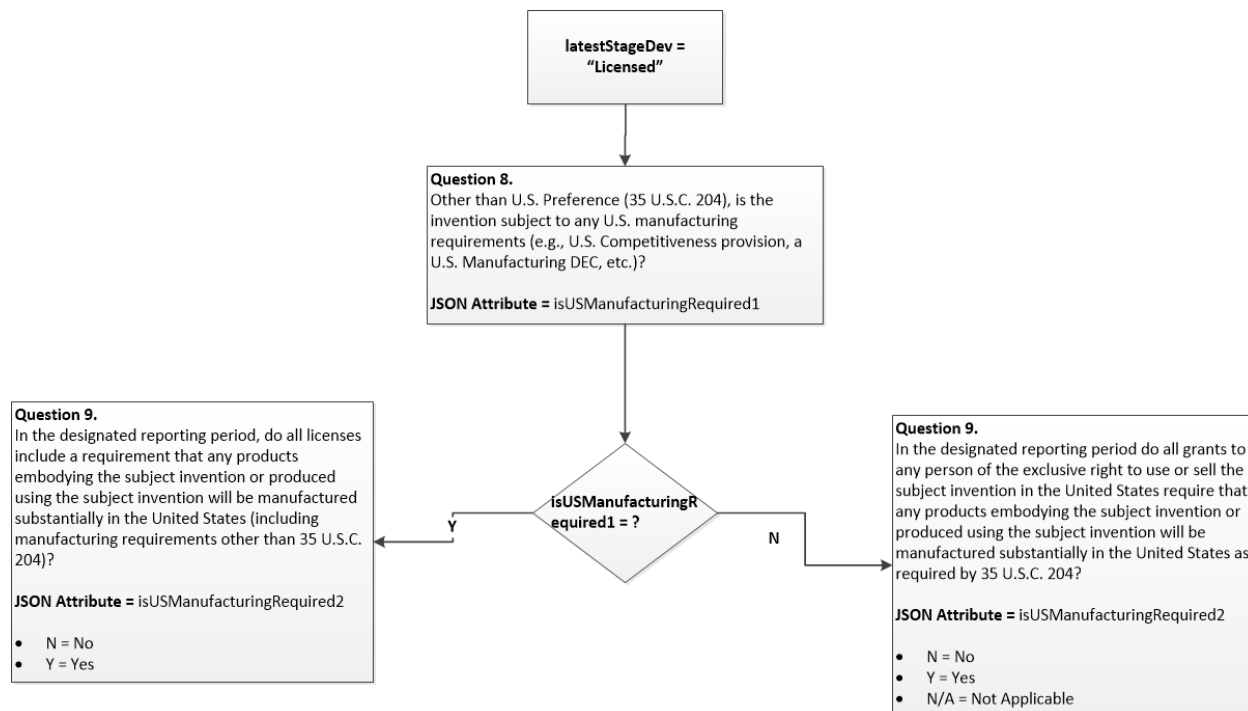
Figure 12-1: Licensed Utilization Questions

12.22 Commercialized Utilization Question Logic for US Manufacturing

This section shows the dynamic question flow if the lastestStageDev = "Commercialized" for Questions 8, 9 and 10. The answer to Question 8 will determine which variation of Question 9 and Question 10 should be answered.

Question 8 is for the attribute USManufacturingRequired1. Question 9 is for the attribute isUSManufacturingRequired2. Question 10 is for the attribute USManufacturingRequired3.
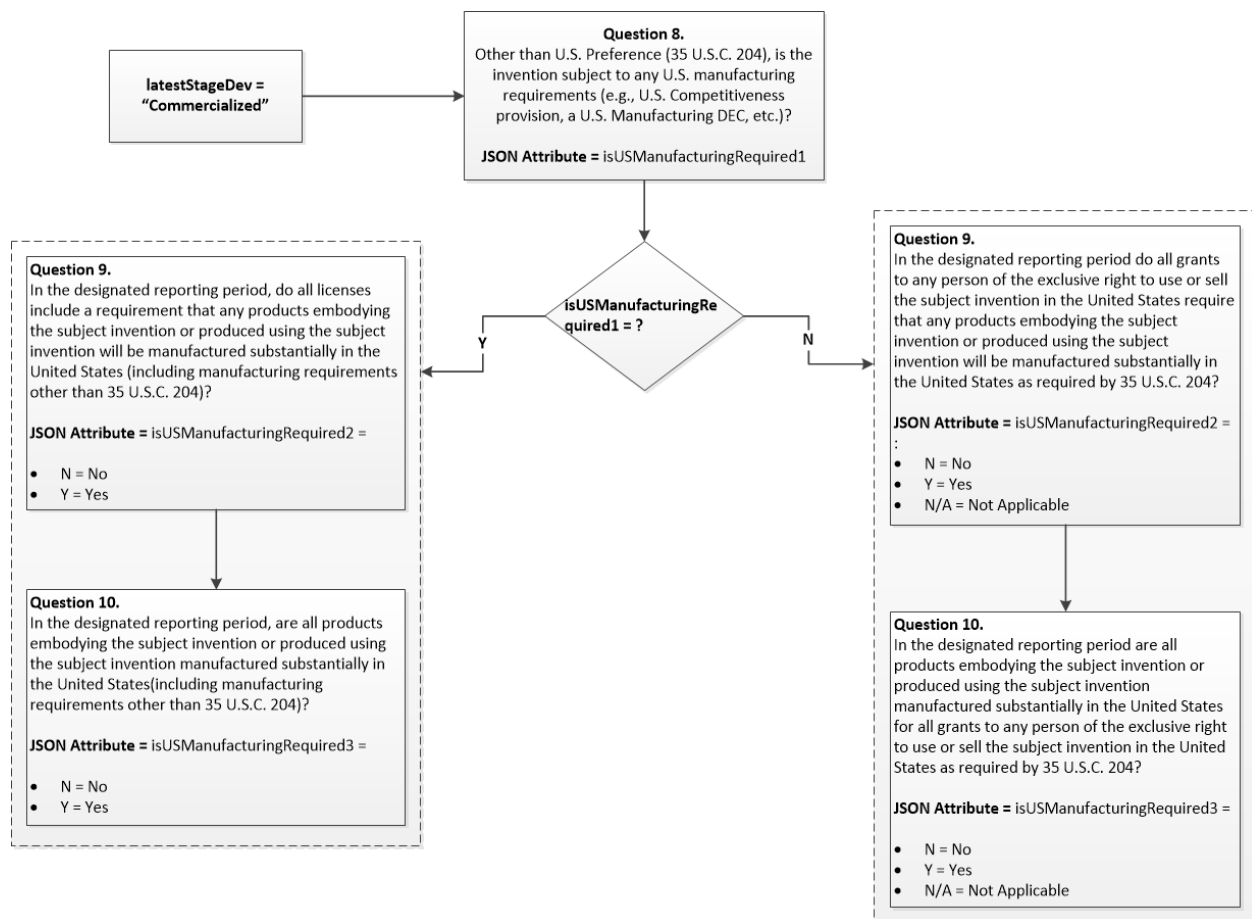
Figure 12-2: Commercialized Utilization Questions

12.23 Document Type Name

This section contains a list of Document Type Name for Invention and Patent. These values are used in the document search to target for specific documentType filter.

Value
Assignment
Confirmatory License
Domestic Manufacture Waiver

Value
Election Extension
Foreign Filing
General
Government Support Clause
Greater Rights Determination
Invention Disclosure
Nonpatented Research Resource
Other Documents
Patent Extension
Provisional Extension
USPTO Recordation
Title Extension
Transfer
Waiver
Void
Domestic Manufacture Waiver Approval Letter
Publication
Custom Report

13 Sample Code Snippet to Consume APIs

The following code snippets show how to connect to iEdison API and consume its services.

The code below is a sample Java code snippet to consume the iEdison Invention search API service. Find the following variables below in the code snippet and replace them with the appropriate changes.

- INVENTIONS_SEARCH   = Build and assign a request JSON string
- HOST_NAME   = iEdison API URL (Ex. https://api-iedisonuat.nist.gov/)
- KEY_STORE.JKS   = Location of a key store with imported certificate
- KEYSTORE_PASSWORD = Key Store password

```java
String INVENTION_SEARCH = "{ \"inventionTitle\": \" \"}";
String VENDOR_API_URL = {HOST_NAME} + "/iedison/api/v1/inventions/search";

SSLContext scl = SslConfigurator.newInstance()
            .keyStoreFile("{KEY_STORE.jks}")
            .keyPassword("{KEYSTORE_PASSWORD}")
            .securityProtocol("TLS")
            .createSSLContext();

final Client client = ClientBuilder
            .newBuilder()
            .sslContext(scl)
            .register(MultiPartFeature.class)
            .build();

FormDataMultiPart formDataMultiPart = new FormDataMultiPart();

final FormDataMultiPart multipart = (FormDataMultiPart)
     formDataMultiPart.field("inventionSearchCriteria", INVENTION_SEARCH);

final WebTarget target = client.target(VENDOR_API_URL);

final Response response = target.request()
   .post(Entity.entity(multipart, multipart.getMediaType()));

assertEquals(response.getStatus(), 200);
formDataMultiPart.close();
multipart.close();
```

This is a sample curl code snippet to consume the iEdison Invention search API service.

```
curl --key /home/lgt2/client-store.key.pem -E /home/lgt2/client-store.crt.pem -X POST -F
'inventionSearchCriteria={"primaryAgency": "NIST","grantContractNumber": "T25252"}' https://api-
iedisonuat.nist.gov/iedison/api/v1/inventions/search
```

Appendix A: Sample Invention Requests and Responses

This appendix contains samples of requests and responses for the Invention API.

A.1   Invention API, v2

Below are sample requests and responses for the Invention API.

A.1.1   Sample 1: Create Invention, v2

Request	Response

<pre>{
    "institutionCode": "7654321",
    "dunsNumber": "790934285",
    "inventionTitle": "Sample Invention 1",
    "inventionDocketNumber": "REST-DOCK-1234",
    "doesNumber": "",
    "parentInventionNumber": "",
    "inventionReportDate": "01/31/2022",
    "firstPublicationDate": "01/31/2022",
    "isExceptionCircumstanceDetermination":
 false,
    "keywords": ["Test Key 1", "Test Key 2"],
    "inventionStatus": {
       "titleElectionStatus": "Elect to Retain Title"
    },
    "inventors": [
       {
          "firstName": "John",
          "lastName": "Stewart",
          "fedEmployee": true,
          "middleInitial": "Q",
          "fedAgency": "NIST"
       }
    ],
    "primaryAgency": "ARMY/ARO",
    "fundingAgreements": [
       {
          "agreementType": "Grant",
          "agency": "ARMY/ARO",
          "grantNumber": "DAAH04-12-1-1234",
          "awardType": "Prime Award"
       }
    ],
    "subContractInfos": [
       {</pre>
	<pre>{
	    "id": 400047,
	    "inventionReportNumber": "07654321-22-
	0103",
	    "granteeOrganizationName": "DAN'S
	INSTITUTION",
	    "institutionCode": "7654321",
	    "dunsNumber": "123456789",
	    "inventionTitle": "Sample Invention 1",
	    "inventionDocketNumber": "REST-DOCK-1234",
	    "doesNumber": "",
	    "parentInventionNumber": "",
	    "inventionReportDate": "01/31/2022",
	    "inventionSubmitDate": "06/10/2022",
	    "reportingOverdue": false,
	    "firstPublicationDate": "01/31/2022",
	    "domesticManufactureWaiver": false,
	    "doeWaiver": "",
	    "isExceptionCircumstanceDetermination":
	false,
	    "keywords": [
	       "Test Key 1",
	       "Test Key 2"
	    ],
	    "inventors": [
	       {
	          "id": 490047,
	          "firstName": "John",
	          "lastName": "Stewart",
	          "fedEmployee": true,
	          "middleInitial": "Q",
	          "fedAgency": "1149"
	       }
	    ],
	    "primaryAgency": "ARMY/ARO",</pre>

Request	Response

`            "contractorState": "CO",`
`            "contractorCity": "Denver",`
`            "contractorName": "James",`
`            "subContractNumber": "AS-787342",`
`            "contractorCountry": "United States",`
`            "contractorDUNS": "738739399"`
`        }`
`    ],`
`    "explanatoryNotes": [{`
`        "note": "This is a testing note"`
`    }]`
`}`
	`    "fundingAgreements": [`
	`      {`
	`        "id": 490047,`
	`        "agreementType": "Grant",`
	`        "agency": "ARMY/ARO",`
	`        "grantNumber": "DAAH04-12-1-1234",`
	`        "awardType": "Prime Award"`
	`      }`
	`    ],`
	`    "subContractInfos": [`
	`      {`
	`        "id": 490047,`
	`        "contractorState": "CO",`
	`        "contractorCity": "Denver",`
	`        "contractorName": "James",`
	`        "subContractNumber": "AS-787342",`
	`        "contractorCountry": "United States",`
	`        "contractorDUNS": "738739399"`
	`      }`
	`    ],`
	`    "inventionStatus": {`
	`      "titleElectionStatus": "Elect to Retain Title",`
	`      "titleElectionDate": "06/10/2022"`
	`    },`
	`    "explanatoryNotes": [`
	`      {`
	`        "id": 490047,`
	`        "note": "This is a testing note",`
	`        "creatorName": "",`
	`        "createdDate": "06/10/2022"`
	`      }`
	`    ],`
	`    "governmentNotes": []`
	`}`
	Example of HTTP Status 400 (Bad Request) or 500 (Internal Server Error)
	`{`
	`    "responseCode": 400,`
	`    "message": "JSON Validation Failed",`
	`    "errors": [`
	`      {`
	`        "code": "400",`
	`        "field": "inventionTitle",`
	`        "message": "Invention Title value is required."`

Request	Response
| | ```
      }
    ]
}
``` |

A.1.2   Sample 2: Update Invention, v2

Request	Response
| ```
{
   "inventionReportNumber": "07654321-22-0103",
   "institutionCode": "7654321",
   "dunsNumber": "790934285",
   "inventionTitle": "Sample Invention 1",
   "inventionDocketNumber": "REST-DOCK-1234",
   "doesNumber": "",
   "parentInventionNumber": "",
   "inventionReportDate": "01/31/2022",
   "firstPublicationDate": "01/31/2022",
   "isExceptionCircumstanceDetermination”:
false,
   "keywords": ["Test Key 1", "Test Key 2", "Test
Update Key3"],
   "inventionStatus": {
      "titleElectionStatus": "Elect to Retain Title"
   },
   "inventors": [
      {
         "firstName": "John",
         "lastName": "Stewart",
         "fedEmployee": true,
         "middleInitial": "Q",
         "fedAgency": "NIST"
      }
   ],
   "primaryAgency": "ARMY/ARO",
   "fundingAgreements": [
     {
        "agreementType": "Grant",
        "agency": "ARMY/ARO",
        "grantNumber": "DAAH04-12-1-1234",
        "awardType": "Prime Award"
     }
   ],
``` | ```
{
   "id": 490047,
   "inventionReportNumber": "07654321-22-0103",
   "granteeOrganizationName": "DAN'S
INSTITUTION",
   "institutionCode": "7654321",
   "dunsNumber": "123456789",
   "inventionTitle": "Sample Invention 1",
   "inventionDocketNumber": "REST-DOCK-1234",
   "doesNumber": "",
   "parentInventionNumber": "",
   "inventionReportDate": "01/31/2022",
   "inventionSubmitDate": "06/10/2022",
   "reportingOverdue": false,
   "firstPublicationDate": "01/31/2022",
   "domesticManufactureWaiver": false,
   "doeWaiver": "",
   "institutionCodeForOtherInstitutions": [],
   "isExceptionCircumstanceDetermination":
false,
   "keywords": [
      "Test Key 1",
      "Test Key 2",
      "Test Update Key3"
   ],
   "inventors": [
      {
         "id": 490047,
         "firstName": "John",
         "lastName": "Stewart",
         "fedEmployee": true,
         "middleInitial": "Q",
         "fedAgency": "NIST"
      }
   ],
``` |

Request	Response

<pre>   "subContractInfos": [
    {
       "contractorState": "CO",
       "contractorCity": "Denver",
       "contractorName": "James",
       "subContractNumber": "AS-787342",
       "contractorCountry": "United States",
       "contractorDUNS": "738739399"
    }
   ],
   "explanatoryNotes": [{
     "note": "This is a testing note"
   },
   {
     "note": "This is an update note."
   }
   ]
 }</pre>
	<pre> "primaryAgency": "ARMY/ARO",
	  "fundingAgreements": [
	    {
	       "id": 490047,
	       "agreementType": "Grant",
	       "agency": "ARMY/ARO",
	       "grantNumber": "DAAH04-12-1-1234",
	       "awardType": "Prime Award"
	    }
	  ],
	  "subContractInfos": [
	    {
	       "id": 490047,
	       "contractorState": "CO",
	       "contractorCity": "Denver",
	       "contractorName": "James",
	       "subContractNumber": "AS-787342",
	       "contractorCountry": "United States",
	       "contractorDUNS": "738739399"
	    }
	  ],
	  "inventionStatus": {
	     "titleElectionStatus": "Elect to Retain Title",
	     "titleElectionDate": "06/10/2022"
	  },
	  "explanatoryNotes": [
	    {
	       "id": 490047,
	       "note": "This is a testing note",
	       "creatorName": "",
	       "createdDate": "06/10/2022"
	    },
	    {
	       "id": 490048,
	       "note": "This is an update note.",
	       "creatorName": "",
	       "createdDate": "06/10/2022"
	    }
	  ],
	  "governmentNotes": []
	}</pre>

A.1.3 Sample 3: Search Invention, v2

- Search by Primary Agency, Date Range and Grant Number

Request	Response

<pre>{
   "primaryAgency": "NIST",
   "inventionReportDateFrom": "2015-01-01",
   "inventionReportDateTo": "2015-12-31",
   "grantContractNumber": "60NANB14D279"
}</pre>
	<pre>{
	   "inventions": [
	      {
	         "id": 490047,
	         "granteeOrganizationName":
	"ORGANIZATION B",
	         "institutionCode": "0820102",
	         "dunsNumber": "790934285",
	         "inventionTitle": "Sample Invention 2",
	         "inventionDocketNumber": "IS-2015-016",
	         "doesNumber": "",
	         "parentInventionNumber": "",
	         "inventionReportDate": "01/29/2015",
	         "inventionSubmitDate": "07/28/2017",
	         "reportingOverdue": false,
	         "domesticManufactureWaiver": false,
	         "doeWaiver": "",
	         "isExceptionCircumstanceDetermination":
	false,
	         "keywords": [],
	         "inventionReportNumber": "0820102-15-
	0070",
	         "inventors": [
	            {
	               "id": 490047,
	               "firstName": "Sandor",
	               "lastName": "Boyson",
	               "fedEmployee": false,
	               "middleInitial": "",
	               "fedAgency": ""
	            },
	            {
	               "id": 490048,
	               "firstName": "Holly",
	               "lastName": "Mann",
	               "fedEmployee": false,
	               "middleInitial": "",
	               "fedAgency": ""
	            },
	            {
	               "id": 490049,
	               "firstName": "Hart",</pre>

Request	Response

	"lastName": "Rossman",
	"fedEmployee": false,
	"middleInitial": "",
	"fedAgency": ""
	}
	
	],
	"primaryAgency": "National Institute of Standards and Technology",
	"fundingAgreements": [
	{
	"id": 245047,
	"agreementType": "",
	"agency": "National Institute of Standards and Technology",
	"grantNumber": "60NANB14D279",
	"awardType": ""
	}
	],
	"subContractInfos": [],
	"inventionStatus": "NOT ELECT TITLE; ASSIGN TO OTHER PARTY",
	"explanatoryNotes": [
	{
	"id": 490047,
	"note": "By: DAUERBACH_EDI\nOn: 2017-07-28\n\nI attempted to report this Invention to iEdison in 2015 but was unable to due to a glitch in iEdison so I reported it (as well as the release of Patent rights) directly to the Grants Officer and Grants Specialist listed on the award document on 11/11/2015. "
	}
	],
	"governmentNotes": []
	}
	],
	"totalRecords": 1,
	"limit": 100,
	"offset": 0
	}
	HTTP Status 400 (Bad Request) and HTTP Status 500 (Internal Server Error)
	{
	"responseCode": 400,

Request	Response
	"message": "Invalid form-data content", "errors": [{ "code": "400", "field": "inventionSearchCriteria", "message": "One or more parameters in request JSON are Invalid. Please verify and submit again : 'primaryAgencfday'" }] }

A.2   Invention Error Responses

Below are samples of Hypertext Transfer Protocol (HTTP) response codes. These codes are returned in response to a request made to the server.

A.2.1   Sample 1: HTTP Status 400 Error Response

HTTP Status 400 errors occur because the server request was malformed and contains bad syntax. The error message will indicate which field is in error and a brief description of the error. Errors may include:

- Required field is missing.
- The attribute is invalid (not defined or misspelled, etc.)
- Using the wrong version of the API.

```
{
  "responseCode": 400,
  "message": "JSON Validation Failed",
  "errors": [
    {
      "code": "400",
      "field": " inventionReportNumber ",
      "message": "Invention Report Number value is required."
    }
  ]
}
```

A.2.2   Sample 2: HTTP Status 401 Error Response

HTTP Status 401 errors occur when authentication is required and has failed or has not yet been provided.

```
{
    "message": "Access Denied",
    "timestamp": "2022-06-10T09:58:10.534055700"
}
```

A.2.3   Sample 3: HTTP Status 500 Error Response

HTTP Status 500 errors occur when an unexpected condition was encountered, and the server failed to process a request.

```
{
    "responseCode": 500,
    "message": "Invalid form-data content",
    "errors": [
        {
            "code": "500",
            "field": "inventionRequest",
            "message": ""Unable to save the Invention."
        }
    ]
}
```

Appendix B: Sample Patent Requests and Responses

This appendix contains samples of requests and responses for the Patent API.

B.1   Patent API, v2

Below are sample requests and responses for the Patent API.

B.1.1   Sample 1: Create Patent, v2

Request	Response

{
   "inventionReportNumber": "07654321-22-0103",
   "patentDocketNumber": "REST-PAT-0017",
   "patentStatus": "Institution Retains Rights",
   "patentTitle": "REST PAT 0017",
   "patentApplicationType": "PROV",
   "provisionalPatentApplication": {
     "provisionalApplicationNumber": "64/999,910",
     "provisionalApplicationDate": "02/02/2022"
   },
   "inventors": [
     {
       "firstName": "John",
       "lastName": "Stewart",
       "fedEmployee": true,
       "middleInitial": "Q",
       "fedAgency": "NIST"
     },
     {
       "firstName": "Jane",
       "lastName": "Doe",
       "fedEmployee": false,
       "middleInitial": "",
       "fedAgency": ""
     }
   ],
   "foreignFilings": [
     {
       "countryName": "AFGHANISTAN",
       "status": "active",
       "filingDate": "02/02/2021"
     }
   ]
	
	{
	   "id": 338529127,
	   "patentDocketNum": "REST-PAT-0018",
	   "inventionReportNumber": "07654321-22-0103",
	   "issuedApplicationNumber": "",
	   "pctAppNum": "",
	   "provisionalAppNum": "64/999,911",
	   "provisionalAppDate": "02/02/2022",
	   "nonProvisionalAppNum": "",
	   "patentApplicationType": "PROV",
	   "patentTitle": "REST PAT 0018",
	   "confLicenseRejectComment": "",
	   "govtSuppClauseRejectComment": "",
	   "abandonedReason": "",
	   "usptoAppStatus": "",
	   "assigned": false,
	   "patentStatus": "Institution Retains Rights",
	   "explanatoryNotes": [],
	   "governmentNotes": [],
	   "govSupClauseActions": [],
	   "inventors": [
	     {
	       "id": "10001",
	       "firstName": "John",
	       "lastName": "Stewart",
	       "fedEmployee": true,
	       "middleInitial": "Q"
	     },
	     {
	       "id": "10002"
	       "firstName": "Jane",
	       "lastName": "Doe",
	       "fedEmployee": false
	     }

Request	Response

}	],
	"foreignFilings": [
	  {
	    "id": "1000",
	    "patentForeignFilingId": 12345,
	    "countryName": "AFGHANISTAN",
	    "status": "active",
	    "filingDate": "02/02/2021"
	  }
	]
	}

B.1.2　Sample 2: Update Patent, v2

Request	Response

{
  "inventionReportNumber": "07654321-22-0103",
  "patentDocketNumber": "REST-PAT-0017",
  "patentStatus": "Institution Retains Rights",
  "patentTitle": "REST PAT 0017-updated",
  "patentApplicationType": "PROV",
  "provisionalPatentApplication": {
    "provisionalApplicationNumber": "64/999,910",
    "provisionalApplicationDate": "02/02/2022"
  },
  "inventors": [
    {
      "firstName": "John",
      "lastName": "Stewart",
      "fedEmployee": true,
      "middleInitial": "Q",
      "fedAgency": "NIST"
    },
    {
      "firstName": "Jane",
      "lastName": "Doe",
      "fedEmployee": false,
      "middleInitial": "",
      "fedAgency": ""
    },
  ],
	{
	  "id": 338529126,
	  "patentDocketNum": "REST-PAT-0017",
	  "inventionReportNumber": "07654321-22-0103",
	  "issuedApplicationNumber": "",
	  "pctAppNum": "",
	  "provisionalAppNum": "64/999,910",
	  "provisionalAppDate": "02/02/2022",
	  "nonProvisionalAppNum": "",
	  "patentApplicationType": "PROV",
	  "patentTitle": "REST PAT 0017-updated",
	  "confLicenseRejectComment": "",
	  "govtSuppClauseRejectComment": "",
	  "parentPatents": [],
	  "abandonedReason": "",
	  "usptoAppStatus": "",
	  "assigned": false,
	  "patentStatus": "Institution Retains Rights",
	  "explanatoryNotes": [],
	  "governmentNotes": [],
	  "govSupClauseActions": [],
	  "inventors": [
	    {
	      "firstName": "John",
	      "lastName": "Stewart",
	      "fedEmployee": true,
	      "middleInitial": "Q",

Request	Response

“foreignFilings”: [
   {
     “countryName”: “AFGHANISTAN”,
     “status”: “active”,
     “filingDate”: “02/02/2021”
   }
  ]
}
	"fedAgency": "NIST"
	   },
	   {
	     "firstName": "Jane",
	     "lastName": "Doe",
	     "fedEmployee": false
	   }
	  ],
	  "foreignFilings": [
	   {
	     "patentForeignFilingId": 12345,
	     "countryName": "AFGHANISTAN",
	     "status": "active",
	     "filingDate": "02/02/2021"
	   }
	  ]
	}

B.1.3   Sample 3: Search Patent, v2

- Search by Patent Application Type and Patent Docket Number

Request	Response

{
  "patentApplicationType": "DIV",
  "patentDocketNumber": "1087.3A"
}
	{
	  "patents": [
	   {
	     "id": 62978,
	     "patentDocketNum": "1087.3A",
	     "inventionReportNumber": "07654321-01-0001",
	     "patentNum": "6197595",
	     "patentDate": "03/05/2001",
	     "provisionalAppNum": "",
	     "provisionalAppDate": "04/19/1999",
	     "nonProvisionalAppNum": "09/294,700",
	     "nonProvisionalAppDate": "04/19/1999",
	     "applicationType": "DIV",
	     "expireDate": "04/19/2019",
	     "patentTitle": "Patent Title A",
	     "confLicenseRejectComment": "",
	     "confLicenseOutdated": false,
	     "govtSuppClauseRejectDate": "05/14/2021",
	     "govtSuppClauseRejectComment": "Government Agency that awarded grant is

Request	Response

	missing. Also, the language of the Government Support Clause is incorrect.",
	    "oldPatentRule": true,
	    "abandonedReason": "",
	    "usptoAppStatus": "",
	    "assigned": false,
	    "patentStatus": "Institution Retains Rights",
	    "explanatoryNotes": [],
	    "governmentNotes": [],
	    "userNotes": [],
	    "govSupClauseActions": [
	      {
	        "id": 53038,
	        "actionType": "R",
	        "documentType": "SC",
	        "actionDate": "12/31/2023",
	        "reasonText": "Government Agency that awarded grant is missing. Also, the language of the Government Support Clause is incorrect."
	      }
	    ]
	    }
	  ],
	  "totalRecords": 1,
	  "limit": 100,
	  "offset": 0
	}

B.2   Patent Error Responses

Below are samples of Hypertext Transfer Protocol (HTTP) response codes. These codes are returned in response to a request made to the server.

B.2.1   Sample 1: HTTP Status 400 Error Response

HTTP Status 400 errors occur because the server request was malformed and contains bad syntax. The error message will indicate which field is in error and a brief description of the error. Errors may include:

- Required field is missing.
- The attribute is invalid (not defined or misspelled, etc.)
- Using the wrong version of the API.

```
{
```

```
   "responseCode": 400,
   "message": "Failed Validation",
   "errors": [
     {
        "code": "400",
        "field": "provAppNum",
        "message": "Provisional Application Number value is required."
     }
   ]
}
```

B.2.2   Sample 2: HTTP Status 401 Error Response

HTTP Status 401 errors occur when authentication is required and has failed or has not yet been provided.

```
{
   "message": "Access Denied",
   "timestamp": "2022-06-10T09:58:10.534055700"
}
```

B.2.3   Sample 3: HTTP Status 500 Error Response

HTTP Status 500 errors occur when an unexpected condition was encountered, and the server failed to process a request.

```
{
   "responseCode": 500,
   "message": "Invalid form-data content",
   "errors": [
     {
        "code": "500",
        "field": "patentRequest",
        "message": ""Unable to save the Patent."
     }
   ]
}
```

Appendix C: Sample Utilization Requests and Responses

This appendix contains samples of requests and responses for v2 and v3 of the Utilization API.

C.1   Utilization API, v2

Below are sample requests and responses for the Utilization API, v2.

C.1.1   Sample 1: Create or Update Utilization, v2

- reportingYear = 2020
- latestStageDev = Not Licensed

Request	Response

{
  "inventionReportNumber":"10004279-24-0011",
  "reportingYear":2020,
  "latestStageDev":"Not Licensed",
  "firstCommercialSaleYear":2018,
  "totalIncome":132.0,
  "manufacturingWaiver":1,
  "manufacturingWaiverTotal":70,
  "domesticLicenseNumber":14,
  "exclusiveLicensesOptions":21,
  "nonExclusiveLicensesOptions":30,
  "smallBusinessLicensesOptions":30,
  "totalGrossSales":8.95,
  "notes": "The quick brown fox jump"
}
	{
	  "inventionReportNumber": "10004279-24-0011",
	  "granteeOrganizationName": "Organization A",
	  "inventionTitle": "Sample Invention 3",
	  "primaryAgency": "National Institute of Standards and Technology",
	  "inventionReportDate": "07/08/2024",
	  "reportingYear": 2020,
	  "latestStageDev": "Not Licensed",
	  "firstCommercialSaleYear": 2018,
	  "totalIncome": 132.0,
	  "manufacturingWaiver": 1,
	  "manufacturingWaiverTotal": 70,
	  "exclusiveLicensesOptions": 21,
	  "domesticLicenseNumber": 14,
	  "nonExclusiveLicensesOptions": 30,
	  "smallBusinessLicensesOptions": 30,
	  "totalGrossSales": 8.95,
	  "notes": "The quick brown fox jump",
	  "createdDate": "08/27/2024"
	}

C.1.2   Sample 2: Create or Update Utilization, v2

- reportingYear = 2023
- latestStageDev = Licensed

Request	Response

{
   "inventionReportNumber": "10004279-24-0011",
   "reportingYear": 2023,
	{
	   "inventionReportNumber": "10004279-24-0011",
	   "granteeOrganizationName": "Organization A",

Request	Response

"latestStageDev": "Licensed",
"firstCommercialSaleYear": 2023,
"totalIncome": 50000.0,
"exclusiveLicensesOptions": 3,
"nonExclusiveLicensesOptions": 3,
"smallBusinessLicensesOptions": 10,
"isUSManufacturingRequired1": "Y",
"isUSManufacturingRequired2": "N",
"isUSManufacturingRequired3": "Y",
"notes": "new utilization notes",
"exclusiveLicensees": [
  "Exclusive name 1",
  "Exclusive name 2",
  "Exclusive name 3"
],
"nonExclusiveLicensees": [
  "Non Exclusive name 1",
  "Non Exclusive name 2",
  "Non Exclusive name 3"
],
"newUsJobs": 100,
"newUsCompanies": 500
}
	"inventionTitle": "Sample Invention 3",
	"primaryAgency": "National Institute of Standards and Technology",
	"inventionReportDate": "07/08/2024",
	"reportingYear": 2023,
	"latestStageDev": "Licensed",
	"firstCommercialSaleYear": 2023,
	"totalIncome": 50000.0,
	"exclusiveLicensesOptions": 3,
	"nonExclusiveLicensesOptions": 3,
	"smallBusinessLicensesOptions": 10,
	"totalGrossSales": 0.0,
	"isUSManufacturingRequired1": "Y",
	"isUSManufacturingRequired2": "N",
	"notes": "new utilization notes",
	"exclusiveLicensees": [
	  "Exclusive name 1",
	  "Exclusive name 2",
	  "Exclusive name 3"
	],
	"nonExclusiveLicensees": [
	  "Non Exclusive name 1",
	  "Non Exclusive name 2",
	  "Non Exclusive name 3"
	],
	"createdDate": "08/27/2024"
	}

C.1.3 Sample 3: Create Utilization Error Response, v2

Note: This is a sample error response. Reporting Year 2024 cannot be used with Version 2. If the reporting year is 2024, Version 3 of the API must be used. A 400 error response is returned.

- reportingYear = 2024
- latestStageDev = Licensed

Request	Response

``json
{
   "inventionReportNumber": "10004279-24-0011",
   "reportingYear": 2024,
   "latestStageDev": "Licensed",
   "firstCommercialSaleYear": 2023,
   "totalIncome": 50000.0,
   "exclusiveLicensesOptions": 3,
   "nonExclusiveLicensesOptions": 3,
   "smallBusinessLicensesOptions": 10,
   "isUSManufacturingRequired1": "Y",
   "isUSManufacturingRequired2": "N",
   "isUSManufacturingRequired3": "Y",
   "notes": "new utilization notes",
   "exclusiveLicensees": [
     "Exclusive name 1",
     "Exclusive name 2",
     "Exclusive name 3"
   ],
   "nonExclusiveLicensees": [
     "Non Exclusive name 1",
     "Non Exclusive name 2",
     "Non Exclusive name 3"
   ],
   "newUsJobs": 100,
   "newUsCompanies": 500
}
``
	``json
	{
	  "responseCode": 400,
	  "message": "Invalid form-data content",
	  "errors": [
	    {
	      "code": "400",
	      "field": "utilizationRequest",
	      "message": "Invalid request. Must use version 3 for reporting year 2024 and later Please verify the Rest parameters and submit request again."
	    }
	  ]
	}
	``

C.2   Utilization API, v3

Below are sample requests and responses for the Utilization API, v3.

C.2.1 Sample 1: Create or Update Utilization, v3

- reportingYear = 2021
- latestStageDev = Not Licensed

Request	Response

{"inventionReportNumber":"10004279-24-0011",
  "reportingYear":2021,
  "latestStageDev":"Not Licensed",
  "firstCommercialSaleYear":2018,
  "totalIncome":132.0,
  "manufacturingWaiver":1,
  "manufacturingWaiverTotal":70,
  "domesticLicenseNumber":14,
  "exclusiveLicensesOptions":21,
  "nonExclusiveLicensesOptions":30,
  "smallBusinessLicensesOptions":30,
  "totalGrossSales":8.95,
  "notes": "The quick brown fox jump "}
	{
	  "id": 123456,
	  "inventionReportNumber": "10004279-24-0011",
	  "granteeOrganizationName": "Organization A",
	  "inventionTitle": "Sample Invention 3",
	  "primaryAgency": "National Institute of Standards and Technology",
	  "inventionReportDate": "07/08/2024",
	  "reportingYear": 2021,
	  "latestStageDev": "Not Licensed",
	  "firstCommercialSaleYear": 2018,
	  "totalIncome": 132.0,
	  "manufacturingWaiver": 1,
	  "manufacturingWaiverTotal": 70,
	  "exclusiveLicensesOptions": 21,
	  "domesticLicenseNumber": 14,
	  "nonExclusiveLicensesOptions": 30,
	  "smallBusinessLicensesOptions": 30,
	  "totalGrossSales": 8.95,
	  "notes": "The quick brown fox jump ",
	  "createdDate": "08/27/2024"
	}

C.2.2   Sample 2: Create or Update Utilization, v3

- reportingYear = 2023
- latestStageDev = Commercialized
- Using previous attributes: "exclusiveLicensesOptions", "nonExclusiveLicensesOptions", "exclusiveLicensees" and nonExclusiveLicensees", "smallBusinessLicensesOptions

Request	Response

{
  "inventionReportNumber": "10004279-22-0006",
  "reportingYear": 2023,
  "latestStageDev": "Commercialized",
  "firstCommercialSaleYear": 2023,
  "totalIncome": 50000.0,
  "isUSManufacturingRequired1": "Y",
  "isUSManufacturingRequired2": "N",
  "isUSManufacturingRequired3": "Y",
  "notes": "new utilization notes",
	{
	  "id": 123456,
	  "inventionReportNumber": "10004279-22-0006",
	  "granteeOrganizationName": "Organization A",
	  "inventionTitle": " Sample Invention 6",
	  "primaryAgency": "National Institute of Standards and Technology",
	  "inventionReportDate": "10/12/2022",
	  "reportingYear": 2023,
	  "latestStageDev": "Commercialized",

Request	Response

"exclusiveLicensesOptions": 4,
"nonExclusiveLicensesOptions": 2,
"smallBusinessLicensesOptions": 10,
"exclusiveLicensees": [
  "Licensee A",
  "Licensee B",
  "Licensee C",
  "Licensee D"
],
"nonExclusiveLicensees": [
  "Licensee A",
  "Licensee E"
],
"newUsJobs": 100,
"newUsCompanies": 500,
"manufacturingCommProds": [
  {
    "productName": "Processor",
    "naicsCode": "ABC123",
    "licensees": [
      {
        "licenseeName": "Licensee A",
        "manufacturers": [
          {
            "manufacturerName":
"Manufacturer D",
            "productLocation": [
              {
                "country": "CHINA",
                "firstDate":"10/10/2021",
                "firstDateType":"Actual",
                "productQuantity":"7"
              },
              {
                "state": "MARYLAND",
                "country": "UNITED STATES",
                "firstDate":"11/11/2021",
                "firstDateType":"Expected",
                "productQuantity":"1"
              }
            ]
          },
          {
            "manufacturerName":
"MANUFACTURER C",
	"firstCommercialSaleYear": 2023,
	"totalIncome": 50000.0,
	"exclusiveLicensesOptions": 4,
	"nonExclusiveLicensesOptions": 2,
	"smallBusinessLicensesOptions": 10,
	"totalGrossSales": 0.0,
	"isUSManufacturingRequired1": "Y",
	"isUSManufacturingRequired2": "N",
	"isUSManufacturingRequired3": "Y",
	"notes": "new utilization notes",
	"exclusiveLicensees": [
	  "Licensee A",
	  "Licensee B",
	  "Licensee C",
	  "Licensee D"
	],
	"nonExclusiveLicensees": [
	  "Licensee A",
	  "Licensee E"
	],
	"manufacturingCommProds": [
	  {
	    "id": 223456,
	    "productName": "Processor",
	    "licensees": [
	      {
	        "id": 23456,
	        "licenseeName": "Licensee A",
	        "manufacturers": [
	          {
	            "id": 1223456,
	            "manufacturerName":
	"Manufacturer D",
	            "productLocation": [
	              {
	                "id": 1223456,
	                "country": "CHINA"
	              },
	              {
	                "id": 1223457,
	                "state": "MARYLAND",
	                "country": "UNITED STATES"
	              }
	            ]
	          },

Request	Response

<pre>   "productLocation": [
        {
          "state": "FLORIDA",
          "country": "UNITED STATES",
          "firstDate":"09/10/2021",
          "firstDateType":"Actual",
          "productQuantity":"3"
        }
      ]
    }
  ]
},
{
  "licenseeName": "Licensee C",
  "manufacturers": [
    {
      "manufacturerName":
"MANUFACTURER C",
      "productLocation": [
        {
          "state": "MARYLAND",
          "country": "UNITED STATES",
          "firstDate":"07/23/2021",
          "firstDateType":"Expected",
          "productQuantity":"8"
        }
      ]
    }
  ]
}
]
},
{
  "productName": "Gmail",
  "licensees": [
    {
      "licenseeName": "Licensee E",
      "manufacturers": [
        {
          "manufacturerName":
"Manufacturer B",
          "productLocation": [
            {
              "state": "COLORADO",
              "country": "UNITED STATES",</pre>
	<pre>{
	  "id": 1323456,
	  "manufacturerName":
	"MANUFACTURER C",
	      "productLocation": [
	        {
	          "id": 1223458,
	          "state": "FLORIDA",
	          "country": "UNITED STATES"
	        }
	      ]
	    }
	  ]
	},
	{
	  "id": 33456,
	  "licenseeName": "Licensee C",
	  "manufacturers": [
	    {
	      "id": 1423456,
	      "manufacturerName":
	"MANUFACTURER C",
	      "productLocation": [
	        {
	          "id": 1223459,
	          "state": "MARYLAND",
	          "country": "UNITED STATES"
	        }
	      ]
	    }
	  ]
	}
	]
	},
	{
	  "id": 33456,
	  "productName": "Gmail",
	  "licensees": [
	    {
	      "id": 33450,
	      "licenseeName": "Licensee E",
	      "manufacturers": [
	        {
	          "id": 1423457,</pre>

Request	Response
<pre>   "firstDate":"12/11/2021",
"firstDateType":"Actual",
"productQuantity":"0"
}
]
}
]
},
{
"licenseeName": "Licensee D",
"manufacturers": [
{
"manufacturerName":
"Manufacturer A",
"productLocation": [
{
"state": "TEXAS",
"country": "UNITED STATES",
"firstDate":"01/12/2021",
"firstDateType":"Expected",
"productQuantity":"6"
}
]
}
]
}
]
}
],
"commercialProds": [
{
"commercialName": "NIH Product A",
"fdaApprovalNumber": "GHD56",
"publicInd": "Yes",
"govtReviewStatus": "Approved",
"fdaApprovalType": "Medical Device"
}
]
}</pre>	<pre> "manufacturerName":
"Manufacturer B",
"productLocation": [
{
"id": 1223450,
"state": "COLORADO",
"country": "UNITED STATES"
}
]
}
]
},
{
"id": 33451,
"licenseeName": "Licensee D",
"manufacturers": [
{
"id": 1423458,
"manufacturerName":
"Manufacturer A",
"productLocation": [
{
"id": 1223452,
"state": "TEXAS",
"country": "UNITED STATES"
}
]
}
]
}
]
}
],
"createdDate": "08/29/2024"
}</pre>

C.2.3   Sample 3: Create or Update Utilization, v3

- reportingYear = 2023
- latestStageDev = Licensed

- Using new "licensees" attribute, the "smallBusinessLicenseeOptions" is automatically computed (smallBusinessLicenseeOptions is not included in the request).

Request	Response

{
  "inventionReportNumber": "10004279-23-0004",
  "reportingYear": 2023,
  "latestStageDev": "Licensed",
  "firstCommercialSaleYear": 2023,
  "totalIncome": 50000.0,
  "isUSManufacturingRequired1": "Y",
  "isUSManufacturingRequired2": "N",
  "isUSManufacturingRequired3": "Y",
  "notes": "new utilization notes",
  "licensees": [
    {"licenseeName":"Licensee A", "exclusiveCount": 87, "nonExclusiveCount":45,"smallBusiness":true},
    {"licenseeName":"Licensee B","exclusiveCount": 15,"smallBusiness":false},
    {"licenseeName":"Licensee C","exclusiveCount": 15,"smallBusiness":false},
    {"licenseeName":"Licensee D","exclusiveCount": 15,"smallBusiness":false},
    {"licenseeName":"Licensee E","nonExclusiveCount":12}
  ],
  "newUsJobs": 100,
  "newUsCompanies": 500
}
	{
	  "id": 123456,
	  "inventionReportNumber": "10004279-23-0004",
	  "granteeOrganizationName": "Organization A",
	  "inventionTitle": " Sample Invention 7",
	  "primaryAgency": "National Institute of Standards and Technology",
	  "inventionReportDate": "09/04/2022",
	  "titleElectDate": "10/13/2023",
	  "reportingYear": 2023,
	  "latestStageDev": "Licensed",
	  "firstCommercialSaleYear": 2023,
	  "totalIncome": 50000.0,
	  "exclusiveLicensesOptions": 132,
	  "nonExclusiveLicensesOptions": 57,
	  "smallBusinessLicensesOptions": 132,
	  "totalGrossSales": 0.0,
	  "isUSManufacturingRequired1": "Y",
	  "isUSManufacturingRequired2": "N",
	  "notes": "new utilization notes",
	  "exclusiveLicensees": [
	    "Licensee A",
	    "Licensee B",
	    "Licensee C",
	    "Licensee D"
	  ],
	  "nonExclusiveLicensees": [
	    "Licensee A",
	    "Licensee E"
	  ],
	  "createdDate": "08/28/2024"
	}

A.2.4 Sample 4: Create or Update Utilization, v3

- reportingYear = 2024
- latestStageDev = Commercialized

Request	Response

{
  "inventionReportNumber": "10004279-12-0005",
  "reportingYear": 2024,
  "latestStageDev": "Commercialized",
  "firstCommercialSaleYear": 2023,
  "totalIncome": 50000.0,
  "isUSManufacturingRequired1": "Y",
  "isUSManufacturingRequired2": "N",
  "isUSManufacturingRequired3": "Y",
  "notes": "new utilization notes",
  "licensees": [
    {"licenseeName":"Licensee A", "exclusiveCount": 87, "nonExclusiveCount":45,"smallBusiness":true},
    {"licenseeName":"Licensee B","exclusiveCount": 15,"smallBusiness":false},
    {"licenseeName":"Licensee D","exclusiveCount": 15,"smallBusiness":false},
    {"licenseeName":"Licensee C","exclusiveCount": 15,"smallBusiness":false},
    {"licenseeName":"Licensee E","nonExclusiveCount":12}
  ],
  "newUsJobs": 100,
  "newUsCompanies": 500,
  "manufacturingCommProds": [
    {
      "productName": "Processor",
      "naicsCode": "ABC123",
      "licensees": [
        {
          "licenseeName": "Licensee A",
          "manufacturers": [
            {
              "manufacturerName": "Manufacturer D",
              "productLocation": [
                {
                  "country": "CHINA",
                  "firstDate":"10/10/2021",
	{
	  "id": 123456,
	  "inventionReportNumber": "10004279-12-0005",
	  "granteeOrganizationName": "Organization A",
	  "inventionTitle": "Sample Invention 4",
	  "primaryAgency": "U.S. Department of Energy",
	  "inventionReportDate": "04/29/2012",
	  "titleElectDate": "07/05/2016",
	  "reportingYear": 2024,
	  "latestStageDev": "Commercialized",
	  "firstCommercialSaleYear": 2023,
	  "totalIncome": 50000.0,
	  "exclusiveLicensesOptions": 132,
	  "nonExclusiveLicensesOptions": 57,
	  "smallBusinessLicensesOptions": 132,
	  "totalGrossSales": 0.0,
	  "isUSManufacturingRequired1": "Y",
	  "isUSManufacturingRequired2": "N",
	  "isUSManufacturingRequired3": "Y",
	  "notes": "new utilization notes",
	  "newUsJobs": 100,
	  "newUsCompanies": 500,
	  "manufacturingCommProds": [
	    {
	      "id": 123456,
	      "productName": "Processor",
	      "naicsCode": "ABC123",
	      "licensees": [
	        {
	          "id": 123456,
	          "licenseeName": "Licensee A",
	          "manufacturers": [
	            {
	              "id": 123456,
	              "manufacturerName": "Manufacturer D",
	              "productLocation": [
	                {
	                  "id": 123456,
	                  "state": "MARYLAND",

Request	Response

<pre>   "firstDateType":"Actual",
            "productQuantity":"7"
        },
        {
            "state": "MARYLAND",
            "country": "UNITED STATES",
            "firstDate":"11/11/2021",
            "firstDateType":"Expected",
            "productQuantity":"1"
        }
        ]
    },
    {
        "manufacturerName":
"MANUFACTURER C",
        "productLocation": [
        {
            "state": "FLORIDA",
            "country": "UNITED STATES",
            "firstDate":"09/10/2021",
            "firstDateType":"Actual",
            "productQuantity":"3"
        }
        ]
    }
    ]
},
{
    "licenseeName": "Licensee B",
    "manufacturers": [
    {
        "manufacturerName":
"MANUFACTURER C",
        "productLocation": [
        {
            "state": "MARYLAND",
            "country": "UNITED STATES",
            "firstDate":"07/23/2021",
            "firstDateType":"Expected",
            "productQuantity":"8"
        }
        ]
    }
    ]
}</pre>
	<pre> "firstDate": "11/11/2021",
	        "firstDateType": "Expected",
	        "productQuantity": 1,
	        "country": "UNITED STATES"
	    },
	    {
	        "id": 123457,
	        "firstDate": "10/10/2021",
	        "firstDateType": "Actual",
	        "productQuantity": 7,
	        "country": "CHINA"
	    }
	    ]
	},
	{
	    "id": 12345,
	    "manufacturerName":
	"MANUFACTURER C",
	    "productLocation": [
	    {
	        "id": 123458,
	        "state": "FLORIDA",
	        "firstDate": "09/10/2021",
	        "firstDateType": "Actual",
	        "productQuantity": 3,
	        "country": "UNITED STATES"
	    }
	    ]
	}
	    ]
	},
	{
	    "id": 123450,
	    "licenseeName": "Licensee B",
	    "manufacturers": [
	    {
	        "id": 123451,
	        "manufacturerName":
	"MANUFACTURER C",
	        "productLocation": [
	        {
	            "id": 123459,
	            "state": "MARYLAND",
	            "firstDate": "07/23/2021",
	            "firstDateType": "Expected",</pre>

Request	Response

```
        ]
      },
      {
        "productName": "Gmail",
        "licensees": [
          {
            "licenseeName": "Licensee E",
            "manufacturers": [
              {
                "manufacturerName":
"Manufacturer B",
                "productLocation": [
                  {
                    "state": "COLORADO",
                    "country": "UNITED STATES",
                    "firstDate":"12/11/2021",
                    "firstDateType":"Actual",
                    "productQuantity":"0"
                  }
                ]
              }
            ]
          },
          {
            "licenseeName": "Licensee C",
            "manufacturers": [
              {
                "manufacturerName":
"Manufacturer A",
                "productLocation": [
                  {
                    "state": "TEXAS",
                    "country": "UNITED STATES",
                    "firstDate":"01/12/2021",
                    "firstDateType":"Expected",
                    "productQuantity":"6"
                  }
                ]
              }
            ]
          }
        ]
      }
    ],
    "commercialProds": [
```

```
                    "productQuantity": 8,
                    "country": "UNITED STATES"
                  }
                ]
              }
            ]
          }
        ]
      },
      {
        "id": 12356,
        "productName": "Gmail",
        "licensees": [
          {
            "id": 223456,
            "licenseeName": "Licensee E",
            "manufacturers": [
              {
                "id": 23456,
                "manufacturerName": "Google",
                "productLocation": [
                  {
                    "state": "COLORADO",
                    "firstDate": "12/11/2021",
                    "firstDateType": "Actual",
                    "productQuantity": 0,
                    "country": "UNITED STATES"
                  }
                ]
              }
            ]
          },
          {
            "id": 223457,
            "licenseeName": "Licensee C",
            "manufacturers": [
              {
                "manufacturerName":
"Manufacturer A",
                "productLocation": [
                  {
                    "state": "TEXAS",
                    "firstDate": "01/12/2021",
                    "firstDateType": "Expected",
                    "productQuantity": 6,
```

Request	Response
<pre>   {
"commercialName": "NIH Product A",
"fdaApprovalNumber": "GHD56",
"publicInd": "Yes",
"govtReviewStatus": "Approved",
"fdaApprovalType": "Medical Device"
}
]
}</pre>	<pre> "country": "UNITED STATES"
}
]
}
]
}
]
}
],
"licensees": [
{
"id": 9268,
"licenseeName": "Licensee A",
"exclusiveCount": 87,
"nonExclusiveCount": 45,
"smallBusiness": true
},
{
"id": 9269,
"licenseeName": "Licensee B",
"exclusiveCount": 15,
"nonExclusiveCount": 0,
"smallBusiness": false
},
{
"id": 9270,
"licenseeName": "Licensee D",
"exclusiveCount": 15,
"nonExclusiveCount": 0,
"smallBusiness": false
},
{
"id": 9271,
"licenseeName": "Licensee C",
"exclusiveCount": 15,
"nonExclusiveCount": 0,
"smallBusiness": false
},
{
"id": 9272,
"licenseeName": "Licensee E",
"exclusiveCount": 0,
"nonExclusiveCount": 12,
"smallBusiness": false
}</pre>

Request	Response
	], "createdDate": "08/27/2024" }

C.3   Search Utilization, v3

Below are sample requests and responses for the Search Utilization API.

C.3.1   Sample 1: Search Utilization

- Search by InventionTitle and Fiscal Year

Request	Response

{
   "inventionTitle": "Sample Invention 5",
   "fiscalYear": 2001
}
	{
	  "utilizations": [
	    {
	       "id": 63831,
	       "inventionReportNumber": "7654321-03-0010",
	       "granteeOrganizationName": "DAN'S INSTITUTION",
	       "inventionTitle": " Sample Invention 5",
	       "primaryAgency": "National Institute of Standards and Technology",
	       "inventionReportDate": "03/07/2003",
	       "titleElectDate": "11/14/2023",
	       "reportingYear": 2001,
	       "latestStageDev": "Commercialized",
	       "totalIncome": 5000.0,
	       "manufacturingWaiver": 0,
	       "exclusiveLicensesOptions": 12,
	       "nonExclusiveLicensesOptions": 13,
	       "smallBusinessLicensesOptions": 14,
	       "createdDate": "04/26/2003",
	       "lastUpdatedDate": "04/22/2022"
	    }
	  ],
	  "totalRecords": 1,
	  "limit": 100,
	  "offset": 0
	}

C.3.2   Sample 2: Search Utilization

- Search by Grant/Contract Number

Request	Response

{
  "grantContractNumber": "SB222222B2222",
  "limit": 5
}
	{
	  "utilizations": [
	    {
	      "id": 92322,
	      "inventionReportNumber": "07654321-06-0001",
	      "granteeOrganizationName": " DAN'S INSTITUTION ",
	      "inventionTitle": " Sample Invention 8",
	      "primaryAgency": "National Institutes of Health",
	      "inventionReportDate": "03/06/2008",
	      "titleElectDate": "07/22/2010",
	      "reportingYear": 2010,
	      "latestStageDev": "Licensed",
	      "totalIncome": 2000000.0,
	      "manufacturingWaiver": 0,
	      "manufacturingWaiverTotal": 0,
	      "exclusiveLicensesOptions": 3,
	      "nonExclusiveLicensesOptions": 0,
	      "smallBusinessLicensesOptions": 1,
	      "totalGrossSales": 0.0,
	      "createdDate": "10/26/2013",
	      "lastUpdatedDate": "01/30/2015"
	    },
	    {
	      "id": 811022,
	      "inventionReportNumber": "07654321-22-0040",
	      "granteeOrganizationName": "DAN'S INSTITUTION",
	      "inventionTitle": " Sample Invention 9",
	      "primaryAgency": "National Institutes of Health",
	      "inventionReportDate": "04/12/2022",
	      "titleElectDate": "04/20/2022",
	      "reportingYear": 2019,
	      "latestStageDev": "Commercialized",
	      "firstCommercialSaleYear": 2020,
	      "totalIncome": 3.0,
	      "manufacturingWaiver": 0,
	      "createdDate": "04/27/2022"
	    },
	    {
	      "id": 811057,

Request	Response
	```json "inventionReportNumber": "07654321-22-0058", "granteeOrganizationName": "DAN'S INSTITUTION", "inventionTitle": " Sample Invention 11", "primaryAgency": "National Institute of Standards and Technology", "inventionReportDate": "04/18/2022", "reportingYear": 2011, "latestStageDev": "Commercialized", "manufacturingWaiver": 0, "createdDate": "04/29/2022" }, { "id": 810964, "inventionReportNumber": "07654321-22-0028", "granteeOrganizationName": "DAN'S INSTITUTION", "inventionTitle": " Sample Invention 12", "primaryAgency": "U.S. Department of Energy", "inventionReportDate": "04/12/2022", "reportingYear": 2022, "latestStageDev": "Licensed", "firstCommercialSaleYear": 2021, "totalIncome": 5600.0, "manufacturingWaiver": 1, "manufacturingWaiverTotal": 3, "exclusiveLicensesOptions": 8, "nonExclusiveLicensesOptions": 3, "smallBusinessLicensesOptions": 5, "totalGrossSales": 6700.0, "newUsJobs": 0, "newUsCompanies": 0, "manufacturingCommProds": [{ "id": 145053209, "productName": "Namra API through Postman test", "naicsCode": "123", "productLocation": [{ "id": 169, "firstDate": "10/28/2021", ```

Request	Response
	```json "firstDateType": "Expected", "productQuantity": 81, "country": "ARUBA" }] }], "commercialProds": [{ "id": 44636, "commercialName": "Test Prod1", "fdaApprovalNumber": "1000001", "publicInd": "Yes", "govtReviewStatus": "Approved", "fdaApprovalType": "Drug" }, { "id": 44637, "commercialName": "Test Prod3", "fdaApprovalNumber": "1000003", "publicInd": "Yes", "govtReviewStatus": "Approved", "fdaApprovalType": "Medical Device" }], "createdDate": "04/20/2022" }, { "id": 811058, "inventionReportNumber": "07654321-22-0059", "granteeOrganizationName": "DAN'S INSTITUTION", "inventionTitle": " Sample Invention 13", "primaryAgency": "National Institutes of Health", "inventionReportDate": "04/13/2022", "reportingYear": 2012, "latestStageDev": "Not Licensed", "firstCommercialSaleYear": 2012, "totalIncome": 10000.0, "manufacturingWaiver": 1, "createdDate": "04/29/2022", "lastUpdatedDate": "02/05/2024" } ```

Request	Response
	], "totalRecords": 45, "limit": 5, "offset": 0 }

C.4   Utilization Error Responses

Below are samples of Hypertext Transfer Protocol (HTTP) response codes. These codes are returned in response to a request made to the server.

C.4.1   Sample 1: HTTP Status 400 Error Response

HTTP Status 400 errors occur because the server could not handle the client request. The request may be malformed and/or contains bad syntax. The error message will indicate which field is in error and a brief description of the error. Errors may include:

- Required field is missing.
- The attribute is invalid (not defined or misspelled, etc.)
- Using the wrong version of the API.

```
{
   "responseCode": 400,
   "message": "Invalid form-data content",
   "errors": [
      {
         "code": "400",
         "field": "reportingYear",
         "message": "Reporting Year (YYYY) * value is required."
      }
   ]
}
```

```
{
   "responseCode": 400,
   "message": "Invalid form-data content",
   "errors": [
      {
         "code": "400",
         "field": "utilizationRequest",
         "message": "Invalid request. Must use version 3 for reporting year 2024 and later  Please verify
the Rest parameters and submit request again."
      }
   ]
```

```
}
```

```
{
   "responseCode": 400,
   "message": "Invalid form-data content",
   "errors": [
      {
         "code": "400",
         "field": "utilizationSearchCriteria",
         "message": "One or more parameters in JSON request are invalid.  Please verify the parameters
and submit request again:   'fiscalYear'"
      }
   ]
}
```

C.4.2   Sample 2: HTTP Status 401 Error Response

HTTP Status 401 errors occur when authentication is required and has failed or has not yet been provided.

```
{
   "message": "Access Denied",
   "timestamp": "2022-06-10T09:58:10.534055700"
}
```

C.4.3   Sample 3: HTTP Status 500 Error Response

HTTP Status 500 errors occur when an unexpected condition was encountered, and the server was not able to process a request.

```
{
   "responseCode": 500,
   "message": "Invalid form-data content",
   "errors": [
      {
         "code": "500",
         "field": "utilizationRequest",
         "message": ""Unable to save the Utilization."
      }
   ]
}
```

Appendix D: Document API Sample Requests and Responses

This appendix contains samples of requests and responses for the Document API.

D.1   Search Document

Below are sample requests and responses for searching for a document.

D.1.1   Sample 1: Search Document

- Search by Invention Report Number

Request	Response
```{ "inventionReportNumber": "7654321-22-0181" }```	```{ "documentsList": [{ "inventionReportNumber": "7654321-22-0181", "documentType": 6, "documentTypeName": "General", "documentID": 739268034, "fileName": "1408.txt", "documentCreateDate": "2022-10-28 10:26:32", "documentUpdateDate": "2022-11-02 11:20:58" }, { "inventionReportNumber": "7654321-22-0181", "documentType": 9, "documentTypeName": "Invention Disclosure", "documentID": 739267910, "fileName": "1320_7654321-22-0181.txt", "documentCreateDate": "2022-10-18 20:22:41", "documentUpdateDate": "2022-11-02 11:20:58" }, { "inventionReportNumber": "7654321-22-0181", "documentType": 6, "documentTypeName": "General", "documentID": 739268013, "fileName": "1717.txt",```

Request	Response

	"documentCreateDate": "2022-10-26 16:04:18",
	      "documentUpdateDate": "2022-11-02 11:20:58"
	    },
	    {
	      "inventionReportNumber": "7654321-22-0181",
	      "documentType": 20,
	      "documentTypeName": "Publication",
	      "documentID": 739268014,
	      "fileName": "1361.txt",
	      "documentCreateDate": "2022-10-26 16:05:30",
	      "documentUpdateDate": "2022-11-02 11:20:58"
	    }
	  ],
	  "totalRecords": 4
	}

D.1.2   Sample 2: Search Document

- Search by Invention Report Number and Patent Docket Number

Request	Response

{
   "inventionReportNumber": "7654321-22-0181",
   "patentDocketNumber": "22-0181-01"
}
	{
	
	 "documentsList": [
	   {
	     "inventionReportNumber": "7654321-22-0181",
	     "patentDocketNum": "22-0181-01",
	     "documentType": 2,
	     "documentTypeName": "Confirmatory License",
	     "documentID": 739268015,
	     "fileName": "confirmatorylicense338527583338529874.pdf",
	     "documentCreateDate": "2022-10-26 16:12:15",
	     "documentUpdateDate": "2022-11-02 17:15:16"
	    },
	    {

Request	Response
	```json "inventionReportNumber": "7654321-22-0181", "patentDocketNum": "22-0181-01", "documentType": 7, "documentTypeName": "Government Support Clause", "documentID": 739268016, "fileName": "Government Support Clause338529874.txt", "documentCreateDate": "2022-10-26 16:12:16", ""documentUpdateDate": "2022-11-02 11:20:58" }, { "inventionReportNumber": "7654321-22-0181", "patentDocketNum": "22-0181-01", "documentType": 17, "documentTypeName": "Waiver", "documentID": 739268017, "fileName": "1307338529874.txt", "documentCreateDate": "2022-10-26 16:12:17", "documentUpdateDate": "2022-11-02 11:20:58" }], "totalRecords": 3 }```

D.2   Download Document

Below are sample requests and responses for downloading a document.

D.2.1   Sample 1: Download Document

- Download by Document ID will return the actual file content in binary stream.

Request	Response

{
    "documentID":
739268017
}
	application/octet-stream

D.2.1   Sample 2: Download Document Error Response

Note: This is a sample error response. The specified Document ID does not exist, and a 400 error response is returned.

- Download by Document ID

Request	Response

{
    "documentID":
739268017
}
	{
	    "responseCode": 400,
	    "message": "No record found.",
	    "errors": [
	        {
	            "code": "400",
	            "field": "DownloadDocumentDTO [documentID=1349949494]",
	            "message": "No Record found."
	        }
	    ]
	}

Appendix E: Notification API Sample Requests and Responses

This appendix contains samples of requests and responses the Notification API.

E.1   Search Notification

Below are sample requests and responses for the searching for a notification.

E.1.1   Sample 1: Search Notification

- Search by Invention Report Number, Message Number and Fiscal Year

Request	Response

<pre>{
    "inventionReportNumber": "7654321-0",
    "messageNumber": 310,
    "fiscalYear":2019
}</pre>
	<pre>{
	  "notifications": [
	    {
	        "inventionReportNumber": "7654321-03-0010",
	        "patentDocketNumber": "N/A",
	        "messageNumber": 310,
	        "messageDescription": "A utilization report must be submitted annually for every invention to which title has been elected. A utilization report for this invention was due on <DUE DATE>.",
	        "organization": "DAN'S INSTITUTION",
	        "fiscalYear": 2019,
	        "status": "Active",
	        "postedDate": "2020-12-31 19:05:01",
	        "dueDate": "2019-12-31 19:00:00"
	    },
	    {
	        "inventionReportNumber": "7654321-04-0039",
	        "patentDocketNumber": "N/A",
	        "messageNumber": 310,
	        "messageDescription": "A utilization report must be submitted annually for every invention to which title has been elected. A utilization report for this invention was due on <DUE DATE>.",
	        "organization": "DAN'S INSTITUTION",
	        "fiscalYear": 2019,
	        "status": "Active",
	        "postedDate": "2020-12-31 19:05:01",
	        "dueDate": "2019-12-31 19:00:00"
	    },</pre>

Request	Response

	{
	    "inventionReportNumber": "7654321-04-0023",
	    "patentDocketNumber": "N/A",
	    "messageNumber": 310,
	    "messageDescription": "A utilization report must be submitted annually for every invention to which title has been elected. A utilization report for this invention was due on <DUE DATE>.",
	    "organization": "DAN'S INSTITUTION",
	    "fiscalYear": 2019,
	    "status": "Active",
	    "postedDate": "2022-04-03 02:00:13",
	    "dueDate": "2019-12-31 19:00:00"
	  },
	  {
	    "inventionReportNumber": "7654321-05-0064",
	    "patentDocketNumber": "N/A",
	    "messageNumber": 310,
	    "messageDescription": "A utilization report must be submitted annually for every invention to which title has been elected. A utilization report for this invention was due on <DUE DATE>.",
	    "organization": "DAN'S INSTITUTION",
	    "fiscalYear": 2019,
	    "status": "Active",
	    "postedDate": "2022-09-08 22:00:03",
	    "dueDate": "2019-12-31 19:00:00"
	  }
	  ],
	  "totalRecords": 4,
	  "limit": 100,
	  "offset": 0
	}

E.1.2 Sample 2: Search Notification

- Search by Invention Report Number and Patent Docket Number

Request	Response

{
  "inventionReportNumber": "7654321-22-0181",
  "patentDocketNumber": "22-0181-01"
}
	{
	  "documentsList": [
	    {
	      "inventionReportNumber": "7654321-22-0181",
	      "patentDocketNum": "22-0181-01",
	      "documentType": 2,
	      "documentTypeName": "Confirmatory License",
	      "documentID": 739268015,
	      "fileName": "confirmatorylicense338527583338529874.pdf",
	      "documentCreateDate": "2022-10-26 16:12:15",
	      "documentUpdateDate": "2022-11-02 17:15:16"
	    },
	    {
	      "inventionReportNumber": "7654321-22-0181",
	      "patentDocketNum": "22-0181-01",
	      "documentType": 7,
	      "documentTypeName": "Government Support Clause",
	      "documentID": 739268016,
	      "fileName": "Government Support Clause338529874.txt",
	      "documentCreateDate": "2022-10-26 16:12:16",
	      ""documentUpdateDate": "2022-11-02 11:20:58"
	    },
	    {
	      "inventionReportNumber": "7654321-22-0181",
	      "patentDocketNum": "22-0181-01",
	      "documentType": 17,
	      "documentTypeName": "Waiver",
	      "documentID": 739268017,
	      "fileName": "1307338529874.txt",
	      "documentCreateDate": "2022-10-26 16:12:17",

Request	Response

	"documentUpdateDate": "2022-11-02 11:20:58"
	     }
	  ],
	  "totalRecords": 3
	}