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U.S. Department of Commerce
U.S. Patent and Trademark Office

Privacy Impact Assessment
for the
Patent Exam Center (PEC)

☒ Concurrence of Senior Agency Official for Privacy/DOC Chief Privacy Officer
☐ Non-concurrence of Senior Agency Official for Privacy/DOC Chief Privacy Officer

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Signature of Senior Agency Official for Privacy/DOC Chief Privacy Officer Date

U.S. Department of Commerce Privacy Impact Assessment
USPTO Patent Exam Center (PEC)

Unique Project Identifier: PPL-PEC-01-00

Introduction: System Description

Provide a brief description of the information system.

Patent Exam Center (PEC) is a read-only, custom developed, cloud-based software application provided by the United States Patent and Trademark Office (USPTO) to allow the patent examiners to search publicly available U.S. patent documents in the USPTO databases. The PEC application is deployed in Amazon Web Services (AWS). PEC receives and transmits information over Hypertext Transfer Protocol Secure (HTTPS) with Patent Search Artificial Intelligence (PSAI) and Docket Application Viewer (DAV). PEC shares information with Official Correspondence (OC). For authentication purposes PEC pull information over HTTPS. PEC will provide examiners with all the data and functionality required to complete their examining work as well as new search features that enhance current capabilities that are provided by the on-prem version of this PE2E Search.
Address the following elements:

(a) Whether it is a general support system, major application, or other type of system

Patent Exam Center (PEC) is a major application.

(b) System location

USPTO Amazon Web Services (AWS) US East/West, in Virginia.

(c) Whether it is a standalone system or interconnects with other systems (identifying and describing any other systems to which it interconnects)

PEC interconnects with:

USPTO Amazon Cloud Services (UACS): The UACS Infrastructure-as-a-Service (IaaS) platform used to support USPTO Application Information Systems (AIS) hosted in the Amazon Web Services (AWS) East/West environment. UACS leverages AWS Infrastructure-as-a-Service (IaaS) mode that enables on-demand Internet access to a shared pool of configurable computing resources including servers, storage, network infrastructure, and other web-based services.

ICAM-IDaaS: Is Okta and it provides an enterprise authentication and authorization service to all applications/AIS's.

Network and Security Infrastructure System (NSI): Is an Infrastructure information system, and provides an aggregate of subsystems that facilitates the communications, secure access, protective services, and network infrastructure support for all USPTO IT applications.

Security and Compliance Services (SCS): SCS provides a centralized command and control console with integrated enterprise log management, security information and event management, network behavior analysis, and reporting through the collection of events, network/application flow data, vulnerability data, and identity information.

Enterprise Software Services (ESS): Enterprise Software Services provides the USPTO organization with a collection of programs that utilize common business applications and tools for modeling how the entire organization works.

Docket Application Viewer (DAV): Provides the Patent Examiners with tools to facilitate the examination of cases and help store, track, and receive case-based knowledge and state information as the examiner accumulates it.

Patent Search Artificial Intelligence (PSAI): The platform used to provide Patent End- to-End (PE2E) Search process with AI capabilities allowing Patent Examiners to perform searches faster, identify more relevant search results, and in a high-compute and secure cloud environment hosted in Google Cloud Platform (GCP).

(d) The way the system operates to achieve the purpose(s) identified in Section 4

PEC is a patent search system for patent examiners to use which is deployed and operating in the cloud.

(e) How information in the system is retrieved by the user

USPTO patent examiners use their Government Furnished Equipment (GFE) to log-in to PEC using OKTA for authentication, and can view published patent applications information.

(f) How information is transmitted to and from the system

Information is transmitted between the PEC system and the Patent Examiners of the system via HTTPS protocol (HTTP w/ TLS encryption) using certificates.

(g) Any information sharing

PEC is an internal powerful search engine that shares information with the USPTO patent

examiners. PEC is internal to USPTO patent examiners for the use of patent determinations.

(h) The specific programmatic authorities (statutes or Executive Orders) for collecting, maintaining, using, and disseminating the information

The specific programmatic authority is 35 U.S.C. § 2(b)(2) and 115.

(i) The Federal Information Processing Standards (FIPS) 199 security impact category for the system

PEC is a Federal Information Processing Standard (FIPS) 199 security categorization of moderate.

Section 1: Status of the Information System

1.1 Indicate whether the information system is a new or existing system.

☐ This is a new information system.
☐ This is an existing information system with changes that create new privacy risks. *(Check all that apply.)*

Changes That Create New Privacy Risks (CTCNPR)					
a. Conversions	☐	d. Significant Merging	☐	g. New Interagency Uses	☐
b. Anonymous to Non-Anonymous	☐	e. New Public Access	☐	h. Internal Flow or Collection	☐
c. Significant System Management Changes	☐	f. Commercial Sources	☐	i. Alteration in Character of Data	☐
j. Other changes that create new privacy risks (specify):					

☐ This is an existing information system in which changes do not create new privacy risks, and there is not a SAOP approved Privacy Impact Assessment.
☒ This is an existing information system in which changes do not create new privacy risks, and there is a SAOP approved Privacy Impact Assessment.

Section 2: Information in the System

2.1 Indicate what personally identifiable information (PII)/business identifiable information (BII) is collected, maintained, or disseminated. *(Check all that apply.)*

Identifying Numbers (IN)					
a. Social Security*	☐	f. Driver's License	☐	j. Financial Account	☐

b. Taxpayer ID	☐	g. Passport	☐	k. Financial Transaction	☐
c. Employer ID	☐	h. Alien Registration	☐	l. Vehicle Identifier	☐
d. Employee ID	☐	i. Credit Card	☐	m. Medical Record	☐
e. File/Case ID	☐				
n. Other identifying numbers (specify): Patent ID					
*Explanation for the business need to collect, maintain, or disseminate the Social Security number, including truncated form:					

General Personal Data (GPD)					
a. Name	☒	h. Date of Birth	☐	o. Financial Information	☐
b. Maiden Name	☐	i. Place of Birth	☐	p. Medical Information	☐
c. Alias	☐	j. Home Address	☒	q. Military Service	☐
d. Gender	☐	k. Telephone Number	☒	r. Criminal Record	☐
e. Age	☐	l. Email Address	☒	s. Marital Status	☐
f. Race/Ethnicity	☐	m. Education	☐	t. Mother's Maiden Name	☐
g. Citizenship	☐	n. Religion	☐		
u. Other general personal data (specify):					

Work-Related Data (WRD)					
a. Occupation	☐	e. Work Email Address	☒	i. Business Associates	☒
b. Job Title	☒	f. Salary	☐	j. Proprietary or Business Information	☒
c. Work Address	☒	g. Work History	☐	k. Procurement/contracting records	☐
d. Work Telephone Number	☒	h. Employment Performance Ratings or other Performance Information	☐		
l. Other work-related data (specify):					

Distinguishing Features/Biometrics (DFB)					
a. Fingerprints	☐	f. Scars, Marks, Tattoos	☐	k. Signatures	☐
b. Palm Prints	☐	g. Hair Color	☐	l. Vascular Scans	☐
c. Voice/Audio Recording	☐	h. Eye Color	☐	m. DNA Sample or Profile	☐
d. Video Recording	☐	i. Height	☐	n. Retina/Iris Scans	☐
e. Photographs	☐	j. Weight	☐	o. Dental Profile	☐
p. Other distinguishing features/biometrics (specify):					

System Administration/Audit Data (SAAD)					
a. User ID	☒	c. Date/Time of Access	☒	e. ID Files Accessed	☒

b. IP Address	☒	f. Queries Run	☒	f. Contents of Files	☒
g. Other system administration/audit data (specify):					

Other Information (specify)

2.2 Indicate sources of the PII/BII in the system. *(Check all that apply.)*

Directly from Individual about Whom the Information Pertains					
In Person	☐	Hard Copy: Mail/Fax	☐	Online	☐
Telephone	☐	Email	☐		
Other (specify):					

Government Sources					
Within the Bureau	☒	Other DOC Bureaus	☐	Other Federal Agencies	☐
State, Local, Tribal	☐	Foreign	☐		
Other (specify):					

Non-government Sources					
Public Organizations	☐	Private Sector	☐	Commercial Data Brokers	☐
Third Party Website or Application			☐		
Other (specify):					

2.3 Describe how the accuracy of the information in the system is ensured.

PEC is secured using appropriate administrative physical and technical safeguards in accordance with the National Institute of Standards and Technology (NIST) security controls (encryption, access control, and auditing). Mandatory IT awareness and role-based training is required for staff, (patent examiners, PEC system administrators and PEC developers), who have access to the system and address how to handle, retain, and dispose of data. All access has role-based restrictions and individuals with privileges have undergone vetting and suitability screening. The USPTO maintains an audit trail and performs random, periodic reviews (quarterly) to identify unauthorized access and changes as part of verifying the integrity of administrative account holder data and roles. Inactive accounts will be deactivated and roles will be deleted from the application.

The patent applicant information accuracy comes directly from the system where the patent applicant submits their application. The patent applicant's information is covered

in the PE2E master system and this system is updated according to USPTO DevSecOps processes. USPTO employees and contractor's information can be updated directly by the appropriate individual through ESS (AD).

2.4 Is the information covered by the Paperwork Reduction Act?

☒	Yes, the information is covered by the Paperwork Reduction Act. Provide the OMB control number and the agency number for the collection. 0651-0031 Initial Patent Processing
☐	No, the information is not covered by the Paperwork Reduction Act.

2.5 Indicate the technologies used that contain PII/BII in ways that have not been previously deployed. *(Check all that apply.)*

Technologies Used Containing PII/BII Not Previously Deployed (TUCPBNPD)			
Smart Cards	☐	Biometrics	☐
Caller-ID	☐	Personal Identity Verification (PIV) Cards	☐
Other (specify):			

☒	There are not any technologies used that contain PII/BII in ways that have not been previously deployed.

Section 3: System Supported Activities

3.1 Indicate IT system supported activities which raise privacy risks/concerns. *(Check all that apply.)*

Activities			
Audio recordings	☐	Building entry readers	☐
Video surveillance	☐	Electronic purchase transactions	☐
Other (specify): Click or tap here to enter text.			

☒	There are not any IT system supported activities which raise privacy risks/concerns.

Section 4: Purpose of the System

4.1 Indicate why the PII/BII in the IT system is being collected, maintained, or disseminated. *(Check all that apply.)*

Purpose			
For a Computer Matching Program	☐	For administering human resources programs	☐
For administrative matters	☒	To promote information sharing initiatives	☒
For litigation	☐	For criminal law enforcement activities	☐
For civil enforcement activities	☐	For intelligence activities	☐
To improve Federal services online	☒	For employee or customer satisfaction	☒
For web measurement and customization technologies (single-session)	☒	For web measurement and customization technologies (multi-session)	☒
Other (specify):			

Section 5: Use of the Information

5.1 In the context of functional areas (business processes, missions, operations, etc.) supported by the IT system, describe how the PII/BII that is collected, maintained, or disseminated will be used. Indicate if the PII/BII identified in Section 2.1 of this document is in reference to a federal employee/contractor, member of the public, foreign national, visitor or other (specify).

The system collects, maintains, or disseminates PII/BII about DOC employees, contractors working on behalf of DOC and members of the public.

PEC was developed for administrative matters, to improve Federal services online, to promote information sharing, and for employee and contractor quick access to patent data/images.

USPTO employee and contractor patent examiners will have their name within the system for standard patent image data retrieval. The employee user ID, email address, office phone number and office location are used for administrative and display purposes only.

The inventor and attorney's information is made public once a patent is granted. The granted patent images are displayed to anyone who searches for the patent. The same information can be obtained from other public patent search systems.

The attorney's name is collected to query the system for associated existing patents.
The inventor's name, address, phone number, and email are collected to query the system for existing patent data searches.

The inventor's patent ID is collected to query the system for a specific patent.

5.2 Describe any potential threats to privacy, such as insider threat, as a result of the bureau's/operating unit's use of the information, and controls that the bureau/operating unit has put into place to ensure that the information is handled, retained, and disposed appropriately. (For example: mandatory training for system users regarding appropriate handling of information, automatic purging of information in accordance with the retention schedule, etc.)

In the event of computer failure, insider threats, or attack against the system by adversarial or foreign entities, any potential PII data stored within the system could be exposed. To avoid a breach, the system has certain security controls in place to ensure the information is handled, retained, and disposed of appropriately. Access to individual's PII is controlled through the application, and all personnel who access the data must first authenticate to the system at which time an audit trail is generated when the database is accessed. These audit trails are based on application server out-of-the-box logging reports reviewed by the Information System Security Officer (ISSO) and System Auditor and any suspicious indicators such as browsing will be immediately investigated and appropriate action taken. Also, system users undergo annual mandatory training regarding appropriate handling of information. NIST security controls are in place to ensure that information is handled, retained, and disposed of appropriately. For example, advanced encryption is used to secure the data both during transmission and while stored at rest. Access to individual's PII is controlled through the application and all personnel who access the data must first authenticate to the system at which time an audit trail is generated when the database is accessed. USPTO requires annual security role based training and annual mandatory security awareness procedure training for all employees. All offices of the USPTO adhere to the USPTO Records Management Office's Comprehensive Records Schedule that describes the types of USPTO records and their corresponding disposition authority or citation.

Section 6: Information Sharing and Access

6.1 Indicate with whom the bureau intends to share the PII/BII in the IT system and how the PII/BII will be shared. *(Check all that apply.)*

Recipient	How Information will be Shared		
	Case-by-Case	Bulk Transfer	Direct Access
Within the bureau	☐	☐	☒
DOC bureaus	☐	☐	☐
Federal agencies	☐	☐	☐
State, local, tribal gov't agencies	☐	☐	☐
Public	☐	☐	☐

Private sector	☐	☐	☐
Foreign governments	☐	☐	☐
Foreign entities	☐	☐	☐
Other (specify):	☐	☐	☐

☐	The PII/BII in the system will not be shared.

6.2 Does the DOC bureau/operating unit place a limitation on re-dissemination of PII/BII shared with external agencies/entities?

☐	Yes, the external agency/entity is required to verify with the DOC bureau/operating unit before re-dissemination of PII/BII.
☐	No, the external agency/entity is not required to verify with the DOC bureau/operating unit before re-dissemination of PII/BII.
☒	No, the bureau/operating unit does not share PII/BII with external agencies/entities.

6.3 Indicate whether the IT system connects with or receives information from any other IT systems authorized to process PII and/or BII.

☒	Yes, this IT system connects with or receives information from another IT system(s) authorized to process PII and/or BII. Provide the name of the IT system and describe the technical controls which prevent PII/BII leakage: PE2E ICAM IDaaS SCS UACS PSAI NIST security controls are in place to ensure that information is handled, retained, and disposed of appropriately. For example, advanced encryption is used to secure the data both during transmission and while stored at rest. Access to individual's PII is controlled through the application and all personnel who access the data must first authenticate to the system at which time an audit trail is generated when the database is accessed. USPTO requires annual security role based training and annual mandatory security awareness procedure training for all employees. All offices of the USPTO adhere to the USPTO Records Management Office's Comprehensive Records Schedule that describes the types of USPTO records and their corresponding disposition authority or citation.
☐	No, this IT system does not connect with or receive information from another IT system(s) authorized to process PII and/or BII.

6.4 Identify the class of users who will have access to the IT system and the PII/BII. *(Check all that apply.)*

Class of Users			
General Public	☐	Government Employees	☒
Contractors	☒		
Other (specify):			

Section 7: Notice and Consent

7.1 Indicate whether individuals will be notified if their PII/BII is collected, maintained, or disseminated by the system. *(Check all that apply.)*

☒	Yes, notice is provided pursuant to a system of records notice published in the Federal Register and discussed in Section 9.	
☒	Yes, notice is provided by a Privacy Act statement and/or privacy policy. The Privacy Act statement and/or privacy policy can be found at: https://www.uspto.gov/privacy-policy	
☐	Yes, notice is provided by other means.	Specify how:
☐	No, notice is not provided.	Specify why not:

7.2 Indicate whether and how individuals have an opportunity to decline to provide PII/BII.

☐	Yes, individuals have an opportunity to decline to provide PII/BII.	Specify how:
☒	No, individuals do not have an opportunity to decline to provide PII/BII.	Specify why not: PECs store images that are not editable. Individuals submitting patent applications are required to submit PII/BII to process the patent application. If an applicant does not provide the PII/BII their patent application cannot be processed. USPTO Employee's and contractor PII is required to access the system, without this information they would not be able to gain access to the information.

7.3 Indicate whether and how individuals have an opportunity to consent to particular uses of their PII/BII.

☐	Yes, individuals have an opportunity to consent to particular uses of their PII/BII.	Specify how:
☒	No, individuals do not have an opportunity to consent to particular uses of their PII/BII.	Specify why not: All the information is required for patent processing and users do not have the opportunity to consent to particular uses of their PII/BII. USPTO Employee's and contractor PII is required to access the system, without this information they would not be able to gain

		access to the information.

7.4 Indicate whether and how individuals have an opportunity to review/update PII/BII pertaining to them.

☐	Yes, individuals have an opportunity to review/update PII/BII pertaining to them.	Specify how:
☒	No, individuals do not have an opportunity to review/update PII/BII pertaining to them.	Specify why not: Members of the public do not have direct access to the system to review or update the PII or BII however they can work with USPTO to update any information submitted that is incorrect or requires updating USPTO employees can contact the system administrators to any PII/BII pertaining to them.

Section 8: Administrative and Technological Controls

8.1 Indicate the administrative and technological controls for the system. *(Check all that apply.)*

☒	All users signed a confidentiality agreement or non-disclosure agreement.
☒	All users are subject to a Code of Conduct that includes the requirement for confidentiality.
☒	Staff (employees and contractors) received training on privacy and confidentiality policies and practices.
☒	Access to the PII/BII is restricted to authorized personnel only.
☒	Access to the PII/BII is being monitored, tracked, or recorded. Explanation: Audit Logs
☒	The information is secured in accordance with the Federal Information Security Modernization Act (FISMA) requirements. Provide date of most recent Assessment and Authorization (A&A): 3/13/2024 ☐ This is a new system. The A&A date will be provided when the A&A package is approved.
☒	The Federal Information Processing Standard (FIPS) 199 security impact category for this system is a moderate or higher.
☒	NIST Special Publication (SP) 800-122 and NIST SP 800-53 Revision 5 recommended security controls for protecting PII/BII are in place and functioning as intended; or have an approved Plan of Action and Milestones (POA&M).
☒	A security assessment report has been reviewed for the information system and it has been determined that there are no additional privacy risks.
☒	Contractors that have access to the system are subject to information security provisions in their contracts required by DOC policy.
☐	Contracts with customers establish DOC ownership rights over data including PII/BII.
☐	Acceptance of liability for exposure of PII/BII is clearly defined in agreements with customers.
☐	Other (specify):

8.2 Provide a general description of the technologies used to protect PII/BII on the IT system. *(Include data encryption in transit and/or at rest, if applicable).*

PII within the system is secured using appropriate management, operational, and technical safeguards in accordance with NIST requirements. Such management controls include a review process to ensure that management controls are in place and documented in the System Security Privacy Plan (SSPP). The SSPP specifically addresses the management, operational, and technical controls that are in place and planned during the operation of the system. Operational safeguards include restricting access to PII/BII data to a small subset of users. All access has role-based restrictions and individuals with access privileges have undergone vetting and suitability screening. Data is maintained in areas accessible only to authorized personnel. The system maintains an audit trail and the appropriate personnel is alerted when there is suspicious activity. Data is encrypted in transit and at rest.

Section 9: Privacy Act

9.1 Is the PII/BII searchable by a personal identifier (e.g, name or Social Security number)?

☒ Yes, the PII/BII is searchable by a personal identifier.

☐ No, the PII/BII is not searchable by a personal identifier.

9.2 Indicate whether a system of records is being created under the Privacy Act, 5 U.S.C. § 552a. *(A new system of records notice (SORN) is required if the system is not covered by an existing SORN).*

As per the Privacy Act of 1974, "the term 'system of records' means a group of any records under the control of any agency from which information is retrieved by the name of the individual or by some identifying number, symbol, or other identifying particular assigned to the individual."

☒	Yes, this system is covered by an existing system of records notice (SORN). Provide the SORN name, number, and link. *(list all that apply)*: COMMERCE/PAT-TM-7, Patent Application Files
☐	Yes, a SORN has been submitted to the Department for approval on (date).
☐	No, this system is not a system of records and a SORN is not applicable.

Section 10: Retention of Information

10.1 Indicate whether these records are covered by an approved records control schedule and monitored for compliance. *(Check all that apply.)*

General Records Schedules (GRS) | National Archives

☒	There is an approved record control schedule. Provide the name of the record control schedule:

	• Evidentiary Patent Applications N1-241-10-1:4.1 • Patent Examination Working Files N1-241-10-1:4.2 • Patent Examination Feeder Records N1-241-10-1:4.4 • Patent Post-Examination Feeder Records N1-241-10-1:4.5 • Patent Case Files, Granted N1-241-10-1:2 • Abandoned Patent Applications, Not Referenced in Granted Case File N1-241-10-1:3 • Patent Administrative & Feeder Records N1-241-10-001:10.3
☐	No, there is not an approved record control schedule. Provide the stage in which the project is in developing and submitting a records control schedule:
☒	Yes, retention is monitored for compliance to the schedule.
☐	No, retention is not monitored for compliance to the schedule. Provide explanation:

10.2 Indicate the disposal method of the PII/BII. *(Check all that apply.)*

Disposal			
Shredding	☐	Overwriting	☒
Degaussing	☐	Deleting	☒
Other (specify):			

Section 11: NIST Special Publication 800-122 PII Confidentiality Impact Level

11.1 Indicate the potential impact that could result to the subject individuals and/or the organization if PII were inappropriately accessed, used, or disclosed. *(The PII Confidentiality Impact Level is not the same, and does not have to be the same, as the Federal Information Processing Standards (FIPS) 199 security impact category.)*

☐	Low – the loss of confidentiality, integrity, or availability could be expected to have a limited adverse effect on organizational operations, organizational assets, or individuals.
☒	Moderate – the loss of confidentiality, integrity, or availability could be expected to have a serious adverse effect on organizational operations, organizational assets, or individuals.
☐	High – the loss of confidentiality, integrity, or availability could be expected to have a severe or catastrophic adverse effect on organizational operations, organizational assets, or individuals.

11.2 Indicate which factors were used to determine the above PII confidentiality impact level. *(Check all that apply.)*

☒	Identifiability	Provide explanation: Names, home address, home telephone number, and other unpublished data like the application number can be combined to identify an individual.
☒	Quantity of PII	Provide explanation: Patent information is in the millions.
☒	Data Field Sensitivity	Provide explanation: The data includes limited personal and work-related elements and

		does not included sensitive identifiable information since all the information is public record information.
☒	Context of Use	Provide explanation: PEC is required to provide access to patent information to USPTO patent examiners.
☒	Obligation to Protect Confidentiality	Provide explanation: NIST Special Publication (SP) 800-122 and NIST SP 800-53 Revision 5 recommended security controls for protecting PII/BII are in place and functioning as intended; or have an approved Plan of Action and Milestones (POA&M); Privacy Act of 1974.
☒	Access to and Location of PII	Provide explanation: The PII within this system is available to USPTO patent examiner. The system stores its data within the cloud and thus logical access is enforced for backend database maintenance.
☐	Other:	Provide explanation:

Section 12: Analysis

12.1 Identify and evaluate any potential threats to privacy that exist in light of the information collected or the sources from which the information is collected. Also, describe the choices that the bureau/operating unit made with regard to the type or quantity of information collected and the sources providing the information in order to prevent or mitigate threats to privacy. (For example: If a decision was made to collect less data, include a discussion of this decision; if it is necessary to obtain information from sources other than the individual, explain why.)

The PII in this system poses a risk if exposed. System users undergo annual mandatory training regarding appropriate handling of information. Physical access to servers is restricted to only a few authorized individuals. The servers storing the potential PII are located in a highly sensitive zone within the cloud and logical access is segregated with network firewalls and switches through an Access Control list that limits access to only a few approved and authorized accounts. USPTO monitors, in real-time, all activities and events within the servers storing the potential PII data and personnel review audit logs received on a regular bases and alert the appropriate personnel when inappropriate or unusual activity is identified.

12.2 Indicate whether the conduct of this PIA results in any required business process changes.

☐	Yes, the conduct of this PIA results in required business process changes. Explanation:
☒	No, the conduct of this PIA does not result in any required business process changes.

12.3 Indicate whether the conduct of this PIA results in any required technology changes.

☐	Yes, the conduct of this PIA results in required technology changes. Explanation:
☒	No, the conduct of this PIA does not result in any required technology changes.