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



Privacy Impact Assessment for the Patent Exam Center (PEC)

Reviewed by: Henry J. Holcombe, Bureau Chief Privacy Officer

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CHARLES CUTSHALL

Digitally signed by CHARLES CUTSHALL Date: 2024.01.02 13:09:11 -05'00'

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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 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 HTTPS with Patent Search Artificial Intelligence (PSAI) and Docket Application Viewer (DAV). PEC shares information with Official Correspondence (OC). For authentication purposes PEC pulls 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.

- Patent End to End (PE2E): The goal of PE2E is to make the interaction of USPTO's users as simple and efficient as possible in order to accomplish user goals. PE2E is a single web-based examination tool providing users with a unified and robust set of tools.
- **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.
- Official Correspondence (OC): Provides the document authoring and workflow management components.
- Patent Search Artificial Intelligence (PSAI): The platform used to provide Patent Endto-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).
- **OKTA:** Provides user authentication for PEC.
- (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 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 patent examiners via HTTPS protocol (HTTP w/ TLS encryption) using certificates provisioned by the PKI team at USPTO.

(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).

(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. \boxtimes 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) d. Significant Merging g. New Interagency Uses a. Conversions b. Anonymous to None. New Public Access h. Internal Flow or Collection Anonymous i. Alteration in Character c. Significant System f. Commercial Sources Management Changes of Data 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 Financial Account k. Financial Transaction b. Taxpayer ID g. Passport c. Employer ID h. Alien Registration Vehicle Identifier d. Employee ID 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	D)				
a. Name	\boxtimes	h. Date of Birth		o. Financial Information	
b. Maiden Name		i. Place of Birth		p. Medical Information	
c. Alias		j. Home Address	\boxtimes	q. Military Service	
d. Gender		k. Telephone Number	\boxtimes	r. Criminal Record	
e. Age		l. Email Address	\boxtimes	s. Marital Status	
f. Race/Ethnicity		m. Education		t. Mother's Maiden Name	
g. Citizenship		n. Religion			
u. Other general personal dat	ta (spec	ify): Username			
Work-Related Data (WRD)					
a. Occupation	ПП	e. Work Email Address	\boxtimes	i. Business Associates	\boxtimes
b. Job Title		f. Salary		j. Proprietary or Business Information	\boxtimes
c. Work Address	\boxtimes	g. Work History		k. Procurement/contracting records	
d. Work Telephone Number	\boxtimes	h. Employment Performance Ratings or other Performance Information			
l. Other work-related data (s	pecify				
Distinguishing Features/Bio	motuio	c (DED)			
a. Fingerprints	liletric	f. Scars, Marks, Tattoos		k. Signatures	
b. Palm Prints		g. Hair Color		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				o. Dental Profile	
0.1 1: .: . 1:	res/bic	⁼	Ш	o. Dentarrionic	
p. Other distinguishing feati	iics/oic	metries (specify).			
System Administration/Aud	it Data				
a. UserID	\boxtimes	c. Date/Time of Access	\boxtimes	e. ID Files Accessed	\boxtimes
b. IP Address f. Queries Run f. Contents of Files					
g. Other system administrati	ion/aud	lit data (specify):			
Other Information (specify)					

	2.2	Indicate sources of the PII/BII in the system.	(Check all that apply.)
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Directly from Individual about Whom the Information Pertains					
In Person		Hard Copy: Mail/Fax		Online	
Telephone		Email			
Other(specify):					
Government Sources					
Within the Bureau	\boxtimes	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 EDS (AD).

2.4 Is the information covered by the Paperwork Reduction Act?

\boxtimes	Yes, the information is covered by the Pa Provide the OMB control number and the 0651-0031 Initial Patent Processing			
	No, the information is not covered by th	e Paperwo	ork Reduction Act.	
	dicate the technologies used that corployed. (Check all that apply.)	ntain PII	/BII in ways that have not been previously	
Tech	nnologies Used Containing PII/BII Not P	reviously	Deployed (TUCPBNPD)	
Smai	rt Cards		Biometrics	
Calle	er-ID		Personal Identity Verification (PIV) Cards	
Othe	er(specify):			
	The area and a second a second at the second	to o setois D	II/DII in ways that have not have a wiscondy dands	
\boxtimes	There are not any technologies used that	contain P	II/BII in ways that have not been previously deplo	yea.
Acti	apply.) vities			
	io recordings		Building entry readers	
	o surveillance	.	Electronic purchase transactions	
Othe	er (specify): Click or tap here to enter te	xt.		
\boxtimes	There are not any IT system supported a	ctivities w	hich raise privacy risks/concerns.	
<u>Se ctio</u>	on 4: Purpose of the System			
	•	ystem is	being collected, maintained, or disseminat	ed.
	(Check all that apply.)			
Purj				
	Computer Matching Program		For administering human resources programs	
Fora	administrative matters	\boxtimes	To promote information sharing initiatives	\boxtimes
Forl	itigation		For criminal law enforcement activities	
Forc	eivil enforcementactivities		For intelligence activities	
To in	mprove Federal services online	\boxtimes	For employee or customer satisfaction	\boxtimes

For web measurement and customization technologies (single-session)	For web measurement and customization technologies (multi-session)	\boxtimes
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 attach 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 adhere to the USPTO Records Management Office's Comprehensive Records Schedule or the General Records Schedule and the corresponding disposition authorities or citations.

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.)

Doginiant	Но	How Information will be Shared					
Recipient	Case-by-Case	Bulk Transfer	Direct Access				
Within the bureau			\boxtimes				
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 p	olace	a limitation on re-dissemination of PII/BII	
	shared with external agencies/entities?			
	Yes, the external agency/entity is required to dissemination of PII/BII.	o verif	y with the DOC bureau/operating unit before re-	
	dissemination of PII/BII.		erify with the DOC bureau/operating unit before re-	
\boxtimes	No, the bureau/operating unit does not share	e PII/B	II with external agencies/entities.	
6.3	Indicate whether the IT system connects systems authorized to process PII and/		th or receives information from any other I'	Т
\boxtimes	Yes, this IT system connects with or received process PII and/or BII.	es in fo	rmation from another IT system(s) authorized to	
	PE2E UACS PSAI			
	Provide the name of the IT system and desc	ribeth	e technical controls which prevent PII/BII leakage:	
	disposed of appropriately. For example both during transmission and while successful through the application and authenticate to the system at which the accessed. USPTO requires annual segment awareness procedure training USPTO Records Management Office General Records Schedule and the content of the system.	tored dall me a curity g for e's Co	personnel who access the data must first n audit trail is generated when the database role based training and annual mandatory all employees. All offices adhere to the emprehensive Records Schedule or the conding disposition authorities or citations.	is
	No, this IT system does not connect with or process PII and/or BII.	receiv	ve information from another IT system(s) authorized	to
6.4	Identify the class of users who will have all that apply.)	ve ac	cess to the IT system and the PII/BII. (Che	ck
	ss of Users			
	eral Public		Government Employees	\boxtimes
	er(specify):	\boxtimes		
a				

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.)

\boxtimes	Yes, notice is provided pursuant to a sys discussed in Section 9.	stem of records notice published in the Federal Register and
\boxtimes	Yes, notice is provided by a Privacy Act	t statement and/or privacy policy. The Privacy Act statement
	and/or privacy policy can be found at: h	
	Yes, notice is provided by other means.	Specify how:
	No, notice is not provided.	Specify why not:
7.2	Indicate whether and how individua	ls 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 stores 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.
	Indicate whether and how individua their PII/BII.	ls have an opportunity to consent to particular uses of
	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.
	Indicate whether and how individua pertaining to them.	ls have an opportunity to review/update PII/BII
	Yes, individuals have an opportunity to review/update PII/BII pertaining to them.	Specify how:
\boxtimes	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 employee's can contact the system administrators to

undata any DII/DII nantainina ta tham	
update any PIV BIT pertaining to them.	

Section 8: Administrative and Technological Controls

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

\boxtimes	All users signed a confidentiality agreement or non-disclosure agreement.
\boxtimes	All users are subject to a Code of Conduct that includes the requirement for confidentiality.
\boxtimes	Staff (employees and contractors) received training on privacy and confidentiality policies and practices.
\boxtimes	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
\boxtimes	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): This is a new system. The A&A date will be provided when the A&A package is approved.
\boxtimes	The Federal Information Processing Standard (FIPS) 199 security impact category for this system is a moderate or higher.
\boxtimes	NIST Special Publication (SP) 800-122 and NIST SP 800-53 Revision 4 Appendix J 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.
\boxtimes	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.
\boxtimes	Other (specify): This system is in development, it will be assessed to ensure compliance with the Federal, DOC and USPTO policies and procedures, and controls will be implemented to protect PII at rest and intransit in accordance with NIST recommended encryption. All sensitive-PII at-rest and in-transit are protected in accordance with NIST recommended encryption.

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 P	PII/BII searchable by a personal identifier (e.g., name or Social Security number)?		
	\boxtimes	Yes, the PII/BII is searchable by a personal identifier.		
		No, the PII/BII is not searchable by a personal identifier.		
9.2	§ 552a. by an example 1 information	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."		
	Provide	is system is covered by an existing system of records notice (SORN). e the SORN name, number, and link. (list all that apply): ERCE/PAT-TM-7, Patent Application Files		
	Yes, a S	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.			
<u>Secti</u>		Retention of Information whether these records are covered by an approved records control schedule and		
-0.1	.,	whether these recovered by all approved records control schedule and		

monitored for compliance. (Check all that apply.)

	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:	
\boxtimes	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	he PII/BII.	(Check all that apply.)				
	Disposal Shredding □ Overwriting						
	gaussing		Deleting	\boxtimes			
Oth	er(specify):						
<u>Se cti</u>	on 11: NIST Special Publication	800-122 P	II 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 n	ot the same,	and does not have to be the same, as the	e			
	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.						
\boxtimes	3.5.4						
	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 (Check all that apply.)	to determine	e the above PII confidentiality impact le	vel.			
	Identifiability		e address, home telephone number, and other data like the application number can be combined.	nedto			
\boxtimes	Quantity of PII	Provide expl Patent infor	anation: mation is in the millions.				
\boxtimes	Data Field Sensitivity	Provide expl The data inc does not inc					
\boxtimes	Context of Use		lanation: PEC is required to provide access to pa to USPTO patent examiners.	atent			
\boxtimes	Obligation to Protect Confidentiality	NIST SP 800 protecting P	lanation: NIST Special Publication (SP) 800-12.0-53 Revision 5 recommended security controls II/BII are in place and functioning as intended; croved Plan of Action and Milestones (POA&M) of 1974.	for or			
\square	Access to and Location of PII	Provide exp	lanation: 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 Explanation:	n required business process changes.				
\boxtimes	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 Explanation:	n required technology changes.				
\boxtimes	No, the conduct of this PIA does not	result in any required technology changes.				