PTO-1390 (01-25) Approved for use through 11/30/2025 OMB 0651-0021 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

	ETTER TO THE UNITED STATES	Attomey Docket No.		
DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371		U.S. Application No. (if known, see 37 CFR 1.5)		
International Application No.	International Filing Date	Priority Date Claimed		
Title of Invention	I	I		
First Named Inventor				
Applicant herewith submits to	the United States Designated/Elected Office (DO/E	EO/US) the following items and information.		
	est to begin national examination procedures (35 U.S effective unless all of the requirements referred to in			
35 U.S.C. 371(c)(1), (c)(2), and (c)(4) Requirements			
2. The basic national fee				
	Application (35 U.S.C. 371(c)(2))*			
a. not attached beca	ause the International Application was published by the eiving Office (RO/US).	e International Bureau and/or was filed with the		
battached heretob RO/US. The cop	ecause the International Application was neither publi y of the International Application must include the Rec	ished by the International Bureau nor filed with the quest, description, claims, abstract, and any drawings. of the description in computer readable form, Item 6. a.		
*Not required if the International	bstract and any drawings from the published applicat	u or was filed with the RO/US. In such case, the Office tion or filed with the RO/US (if not published) for the		
4. An English translation of the	International Application (35 U.S.C. 371(c)(2))			
a. attached hereto. I required.	IOTE: If the International Application contains a sequer	nœ listing in computer readable form, Item 6. b. may be		
b. not attached bec	ause the International Application was filed or publishe	ed in English.		
c. not attached bec	ause the translation was previously filed during the inte	ernational phase under 35 U.S.C. 154(d)(4).		
5. An oath or declaration of the	inventor(s) (35 U.S.C. 371(c)(4))			
aattached hereto.				
b. previously filed du	rring international phase under PCT Rule 4.17(iv).			
Sequence Listing				
	ter readable form (<i>i.e</i> . ST.25 textfile where the interna onal filing date is on or after July 1, 2022) provided as			
ST.25 text ST.26 XML				
	t of the copy of the International Application, under 35 ne International Application by the International Burea			
	anslation into English of the sequence listing part of th .C. 371(c)(2)).	ne description of the International Application (37		
Apr	reliminary amendment to add a "Sequence Listing XM vlication does not comprise a sequence listing, or to re rmational Application, under 37 CFR 1.835(b).			
Inte	reliminary amendment to add a "Sequence Listing" in t rmational Application does not comprise a sequence list tained in the International Application, under 37 CFR 1	sting, or to replace the sequence listing (text format)		
seq	Sequence Listing" in text format under 37 CFR 1.821(uence listing in PDF (image) format contained as a se mational Application.			

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file. A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995, unless the information collection has a currently valid OMB Control Number. The OMB Control Number for this information collection is 0651-0021. Public burden for this form is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to the Chief Administrative Officer, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 or email InformationCollection@uspto.gov. DO NOT SEND FEES OR COMPLETED FORMSTO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450**.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.
PCT Article 19 and 34 amendments
7. Amendment to the claims under PCT Article 19 (not required if published by the International Bureau) (35 U.S.C. 371(c)(3)).
8. English translation of the PCT Article 19 amendment (35 U.S.C. 371(c)(3)).
9. English translation of Article 19 and/or 34 amendments (i.e. annexes to the International Preliminary Examination Report) (35 U.S.C. 371(c)(5)).
10. A request to cancel amendments made during international phase.
a. Do not enter the amendment made in the international phase under PCT Article 19.
b. Do not enter the amendment made in the international phase under PCT Article 34.
NOTE: A proper amendment made in English under Article 19 or 34 will be entered in the U.S. national phase application absent a clear instruction from applicant not to enter the amendment(s).
Additional documents
11. A preliminary amendment.
12. A substitute specification. NOTE: A substitute specification carnot include claims. See 37 CFR 1.125(b).
13. An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
14. An Application Data Sheet under 37 CFR 1.76.
15. Applicant hereby requests that the name of the applicant be corrected or updated under 37 CFR 1.46(c)(1). An Application Data Sheet (ADS) in accordance with 37 CFR 1.76(c) with the corrected or updated information is included. Note: Requests under 37 CFR 1.46(c)(1) may be filed to correct typographical errors in the name of the § 1.46 applicant, or for updating the name of the § 1.46 applicant (i.e., where there is no change in the applicant itself but just in the applicant's name). See the Manual of Patent Examining Procedure (MPEP) section 605.01 and 1893.01(b).
16. Applicant hereby requests that the applicant be changed under 37 CFR 1.46(c)(2). An application data sheet (ADS) in accordance with 37 CFR 1.76(c) identifying the change and a Statement Under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) are included. See MPEP 605.01, 1893.01(b) and 325.
17. A power of attorney and/or change of address letter.
18. Assignment papers <i>(cover sheet and document(s))</i> . Name of Assignee:
19. 37 CFR 3.73(c) Statement (when there is an Assignee).
20. Other items or information:
NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a)) must be filed in the national phase application and granted to restore the International Application to pending status.

FEE CALCULATION	Fee Amounts
21. Basic national fee (37 CFR 1.492(a))	\$
 22. Examination fee (37 CFR 1.492(c)) If the written opinion prepared by ISA/US or the international preliminary examination report prepared by IPEA/US indicates that all claims satisfy provisions of PCT Article 33(1)-(4)\$0 All other situations\$880 	\$
 23. Search fee (37 CFR 1.492(b)) If the written opinion prepared by ISA/US or the international preliminary examination report prepared by IPEA/US indicates that all claims satisfy provisions of PCT Article 33(1)-(4)\$0 If the search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as International Searching Authority\$150 If the International Search Report was prepared by an ISA other than the US and is provided to the Office or previously communicated to the US by the International Bureau\$580 All other situations\$770 	
SUBTOTAL: 21 + 22 + 23	= \$
24. Application size fee (37 CFR 1.492(j)) Fee for each additional 50 sheets, or fraction thereof, of the published International Application specification (including description, claims, abstract and, if present, sequence listing in PDF format) and drawings, in excess of 100 sheets. Total sheets Extra sheets - 100 = / 50 =	+ \$
25. Excess claim fees (37 CFR 1.492(d-f)) Total claims Extra claims Fee Due 20 = x \$200 = Independent claims Extra claims Fee Due	+ \$ + \$
Multiple dependent claim(s), if applicable\$925	+ \$
26. Surcharge for furnishing any of the search fee, examination fee, or the oath or declaration after the date of commencement of the national stage (37 CFR 1.492(h))\$170	+ \$
27. Processing fee for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i))	+ \$
 28. Continuing Application fee (37 CFR 1.17(w)) If the international filing date of the application is more than six years, and no more than nine years, after the earliest benefit date	+\$
 29. Fee for very lengthy sequence listing (mega-sequence listing) (37 CFR 1.21(o)) Sequence listing in electronic form of 300MB to 800MB (without file compression)\$1,140 Sequence listing in electronic form of more than 800MB (without file compression)\$11,290 	+\$
30. TOTAL OF ABOVE FEES	=
Applicant asserts small entity status. See 37 CFR 1.27. Fees above are reduced by 60%.	
Applicant certifies micro entity status. See 37 CFR 1.29. Fees above are reduced by 80%. Applicant must attach form PTO/SB/15A or PTO/SB/15B or equivalent.	
TOTAL NATIONAL FEE	= \$
Fee for recording the enclosed assignment (37 CFR 1.21(h)(2)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31)	+ \$
TOTAL FEES ENCLOSED	= \$

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Signature	Date		
Name (Print/Type)		tration No. ney/Agent)	

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013), https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf.

Routine uses of the information in this record may include disclosure to: 1) law enforcement, in the event that the system of records indicates a violation or potential violation of law; 2) a federal, state, local, or international agency, in response to its request; 3) a contractor of the USPTO having need for the information in order to perform a contract; 4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record; 5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record; 6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations; 7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals; 8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)); 9) the Office of Personnel Management (OPM) for personnel research purposes; and 10) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.