Carnegie Mellon University

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Please list additional inventor(s) and relevant information on an additional sheet

3. Description	3.	De	esc	ri	pt	io	r
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a. Please provide a short (1-2 paragraph), <u>non-confidential</u> description of your intellectual property in the space below.

b. Please attach a detailed description of the intellectual property – do not 'reinvent the wheel' (pun intended) - as both unpublished and/or previously published documents are encouraged. Feel free to attach sketches, drawings, photographs and other materials that help illustrate the description. In the attached materials, please address the following questions: How does this technology differ from present technology? What problems does it solve, and what advantages does it possess? What are the present and future uses and applications of this technology? What are the disadvantages or limitations of this technology? Has the technology been tested experimentally? Are experimental data available? Also, please suggest 3-10 keywords that someone in your field or someone in industry might use to search for your technology.

			s (Please "X" all that apply):		
	A composition of matter (chemA machine	ical entity)			
	A machine A method or process				
	Software				
	Designs or other copyrightable	materials			
	Biological materials				
	Other; please specify				
For t	he questions #4b and 4c, please in	ndicate the date in the forn	nat "Month/Day/Year" (ex. 01/01/17).		
b.	State first date of:				
	Conception Skotch or drawing				
	2. Sketch or drawing3. Written description				
	4. Completion of working model				
	(or operational process)				
c.	State earliest date, actual or exp	ected of:			
0.	Disclosure to others (non-CMU)				
	2. Printed publication	_			
	3. Oral disclosure (e.g. seminars, conferences, etc.);				
	4. Use for profit or Offer for sale.				
d.	If your work has been disclosed to provisions of either a Funding Ag		gie Mellon, was it made under the Confidentiality Agreement?		
e.	Has there been a prior art/patent include copies of any resulting do		elating to this technology? If yes, please		
e. f.	include copies of any resulting do	ocumentation. en submitted for this intelle	elating to this technology? If yes, please ectual property as of this date? If yes,		
	include copies of any resulting do Have any patent applications bee	ocumentation. en submitted for this intelle ulting documentation.	ectual property as of this date? If yes,		
f.	Have any patent applications bee	ocumentation. en submitted for this intelle ulting documentation.	ectual property as of this date? If yes,		
f. g. 5.	Have any patent applications been please include copies of any resulting do	ocumentation. en submitted for this intelle ulting documentation.	ectual property as of this date? If yes,		
f. g. 5.	Have any patent applications been please include copies of any resulting do have you been personally involves. Sponsorship	en submitted for this intelle ulting documentation. ed in any prior patent proc	ectual property as of this date? If yes, esses for any other technology?		
f. g. 5.	Have any patent applications been please include copies of any resulting do have you been personally involves. Sponsorship	en submitted for this intelle ulting documentation. ed in any prior patent proc	ectual property as of this date? If yes, esses for any other technology?		

Have external sponsors been informed of the invention? Please state yes or no. _____

Carnegie Mellon - Center for Technology Transfer

b.	If funded under a grant or contract, please describe this intellectual property as one of the following (Please "X" one):
	Background IP (developed prior to but used in research supported by the grant) Background IP Improvement (developed both prior to and during the grant) Foreground IP (developed only during the grant)
c.	Internal Sponsor (Department Research Funds, etc.)
d.	Was this intellectual property developed in collaboration with any other 3rd parties (companies, universities, etc.) or as a part of a research consortium? Please state yes or no, and list collaborators or consortium below:
6. a.	Use of 3 rd Party Resources Have you used any third-party resources in the creation of your technology (i.e, material or equipment from a company or university under a Material Transfer Agreement (MTA) or other formal or informal agreement)?
b.	Have you used any software, libraries, etc. from other internal (e.g., CMU) sources (ex. projects or researchers) in the development of this technology or does the technology otherwise build upon earlier work at CMU?
c.	Have you used any Open Source software in the development of this technology? Please list below:
7. a.	Commercialization Give your opinion on the current stage of development of the technology as it relates to its current marketability (Please "X" the appropriate response.)
	embryonic (needs substantial work to bring to market)
	partially developed (could be brought to market with nominal investment)
	off-the-shelf (could be brought to market with minimal investment)
b.	Has the technology been disclosed or provided to any industry representatives? Has any industry representative, entrepreneur or funder shown commercial interest in this technology? Do you know (or have reason to believe) there will be commercial interest in this invention? Please specify any application areas and/or products currently on the market that you feel may embody aspects of your technology.

further involvement (ex. # months, weeks, years)?

c.

d.	Please rate how interested "X" one)	you are in starting a firm to commercialize t	he technology? (Please	
	 1. Highly interested. I've a 2. Somewhat interested. 3. I've not considered it p 4. Not particularly interes 5. Would not be willing to 	I'd like to know more about it. ositively or negatively. ted, but willing to consider it under the right (circumstances.	
8.	Please recommend two professionals from the CMU community who would be best suited to evaluate the <u>technical and commercial</u> merits of this technology:			
	a. Name:	Dept.:	Ext.:	
	Email:			
	b. Name:	Dept.:	Ext.:	
	Email:			

How long would it take you to verbally transfer the requisite, implicit knowledge to industry peers in

order to enable the development and commercialization of the technology without your substantial,

Please feel free to attach additional material or data that would provide us with helpful information.

Email the completed electronic copy of this Invention Disclosure form to:

innovation@cmu.edu

If unable to sign electronically, paper copies may be sent to:

Department Administrator Center for Technology Transfer & Enterprise Creation 4615 Forbes Avenue, Suite 302