



## **REQUEST FOR R&D PROPOSALS**

**on**

**Cyber Crime/Security/Digital Forensic Solutions**

Issued by:

**National Cyber Research & Innovation Centre (NCR&IC)**

(Under I4C Scheme of MHA)

**Bureau of Police Research & Development**

NH-8, Mahipalpur, New Delhi-110037.

Website- [www.bprd.nic.in](http://www.bprd.nic.in)

## Contents

1	Letter of Invitation.....	4
2	About BPR&D.....	5
2.1	Introduction .....	5
3	Scope of Work.....	6
4	Notice Inviting Bid .....	12
5	Pro forma for Submitting R&D Project Proposal Seeking Financial Support .....	13
5.1	Summary Sheet .....	13
6	Details of the Proposal.....	16
6.1	Part I: Background Information .....	16
6.2	Part II: Project Details .....	17
6.3	Part III: Financial Details .....	18
6.4	Part IV: Terms and Conditions governing the grant-in-aid.....	20
6.5	ANNEXURE-I.....	27
6.6	Part V: Endorsement by the Head of the Institution .....	30

## Acronyms

BPR&D	Bureau of Police Research and Development
CDR	Call Detail Record
DPI	Deep Packet Inspection
EOI	Expression Of Interest
GoI	Government of India
I4C	Indian Cyber Crime Coordination Centre
IMEI	International Mobile Equipment Identity
IPDR	Internet Protocol Detail Record
IPR	Intellectual Property Rights
IPV4	Internet Protocol Version 4
IPV6	Internet Protocol Version 6
IVRS	Interactive Voice Response System
LEA	Law Enforcement Agency
MAC	Media Access Control
MHA	Ministry of Home Affairs
MSME	Micro, Small and Medium Enterprises
NPCI	National Payments Corporation of India
OEM	Original Equipment Manufacturer
OSINT	Open Source Intelligence
RFP	Request For Proposal
SIGINT	Signal Intelligence
SOCMINT	Social Media Intelligence
SOP	Standard Operating Procedure
ToT	Transfer of Technology
VoIP	Voice over Internet Protocol
VPN	Virtual Private Network

## 1. Letter of Invitation

FILE No: M-12014(02)/1/2019-PSO (E)-Part 2

DATE: 30/01/2020

Dear Sir/Ma'am,

**Subject: Request for Proposals (RFP) on research-based design & development of software/hardware solutions in the field of Cyber Crime/ Security/ Digital Forensics**

The Bureau of Police Research and Development (BPR&D) invites R&D projects from Academia, Start-ups/Incubation Centres and other Research & Development Organizations in finding solution to the problems envisaged by States/UTs Police and other Law Enforcement Agencies (LEAs) in resolving cyber crime investigation and digital forensic challenges. It is proposed to establish strategic partnerships in the area of research and innovation focused on cybercrimes, cybercrime impact containment and investigation under GoI funding.

2. A list of problem statements is attached under Section 3, Scope of Work, of this document. All such entities interested in undertaking developmental projects in providing workable solutions to the problems (in part or full) are invited to forward their proposals. It is also emphasized that the problem statements and their scope of work is indicative but not limited to the extent stated there in. The bidding institutes shall propose specific title of the project and its modules while submitting their proposal.
3. The proposal shall be submitted in the given pro forma.

  
(Karuna Sagar)

Director/ IG (Mod.)

**Encl.: RFP Pro forma**

## 2. About BPR&D

### 1.1 Introduction

- i. The Bureau of Police Research and Development is engaged in promoting good practices and standards and is making strides in the following domains:
  - Developing standardization and accreditation norms for Police technologies.
  - Evolving police practices congruent with emerging challenges of low intensity conflict, safe & smart city policing, cyber security & forensics, communication tradeoffs and so on
  - Speedy and quantitative investigation, prosecution & ‘end-justice’
  - Quality of correctional services with focus on psycho-behavioral aspects, skill generation and mainstreaming confluence
  - People friendly policing formats with focus on community interface and impact assessment mechanism.
  - Integrating scholars, professionals, businessmen, NGOs and various social justice organizations with policing grid for greater synergy, evolving as a national resource.
  
- ii. The National Cyber Research and Innovation Centre is one of the verticals under the Indian Cyber Crime Coordination Centre (I4C) Scheme of the MHA, established at the BPR&D with aims and objectives as under:
  - Track emerging technological developments; proactively predict potential vulnerabilities, which can be exploited by cybercriminals.
  - To leverage the strength and expertise of all stakeholders, be it academia, private sector or inter-governmental organizations.
  - Create strategic partnerships with all such entities in the area of research and innovation focused on cybercrimes, cybercrime impact containment and investigation.

**3. Scope of Work:** Design and Develop a Software/ Hardware Application/ Solution to the problems stated hereunder to meet the requirements of Law Enforcement Agencies (LEAs). The bidding Institutions/ Organizations shall conceive 'A Title of the Project' out of the Problem Statements mentioned hereunder and submit detailed RFP in the format appended herewith.

**Problem Statements:**

**1. Problem statement number: RD001**

- i. Description:** Design & Develop a software application which will analyze CDR, Cell Tower Dump & IPDR/CDR in VoIP data in different file formats like (.xlsx/.csv/.txt etc.) as input
  
- ii. Indicative Scope of Work:**
  - a. The solution should provide visual and filter based analysis features on given CDR, Cell Tower Dump and IPDR/CDR in VoIP as case input feed
  - b. Single Number Analysis: - CDR Data Analysis Solution should help to analyze a single Common Number
  - c. Multiple Number Analysis: - CDR Data Analysis Solution should help to analyze Multiple Common Number search from given CDR files
  - d. IMEI Analysis: - CDR Data Analysis Solution should search IMEI Number list from given CDR file (One or more IMEI Numbers at a time).
  - e. Tower Analysis: - CDR Data Analysis Solution should help to analyze Cell Tower information as per user requirements
  - f. Max Data Analysis: - Solution should group common numbers according to max call, max durations, max IMEI and Max Cell Tower Information.
  - g. The solution should provide Source, Public and Destination IP/Port related Whois information and Cell ID/Tower Geographic location related information in a given file.
  - h. The location feeds in the given data sheet should be correlated, marked and located in Google Maps
  - i. Desired Solution: The solution should take different input file formats like .XLSX, .CSV, TXT. and it should covert into Info Graphical and Data Visualizer forms with connected Roots, Nodes and Edges Relationships
  - j. The solution should provide auto generated report with key findings

**2. Problem statement number: RD002**

- i. Description:** Design & Develop software tool/framework for tracking and tracing the source of VOIP calls

**ii. Indicative Scope of Work:**

- a. The tools should trace & track VOIP call origin point using advanced technologies and methods. It should identify End User IP/Service Provider IP/Caller ID and other Credential Details, including ISD numbers.
- b. The tool should provide Deep Packet Inspection (DPI) feature/Packet Monitoring features on VOIP calls
- c. The tool should provide functionality to search Phone Books/Lookup and other records

**3. Problem statement number: RD003**

**i. Description:** Design and Develop Digital Solution(s) to identify Proxy/VPN enabled systems along with source IP (IPV4/IPV6) address tracking and tracing features

**ii. Indicative Scope of Work:** Nowadays criminals are hiding their physical (MAC Address) and Logical address (IP Address) using Spoofing, Proxy and VPN techniques while committing the crime. The required solution should have minimum of the following features

- a. The solution should scan and detect the given IP address (IPv4/IPv6) whether it is Original IP or Proxy/VPN enabled IP address
- b. The solution should fetch the details of Whois Records of respective IP address or Website input and MAC address driven OEMs.
- c. It should include an additional feature to identify and capture IP & MAC Addresses when the user clicks on a provided web link. Further suggestions are welcomed from bidders.

**4. Problem statement number: RD004**

**i. Description:** Identification of Morphed/Edited/Fabricated portion from given Video/Audio/Image files as investigation input

**ii. Indicative Scope of Work:**

- a. The solution should generate detailed report along with morphed/fabricated portion details in a given file.
- b. The solution should take crime input as single file or multiple files for morph detection.
- c. The solution should provide file authentication & detect IVRS enabled voice inputs and Cheap Fake/ Deepfake Image/Video files

- a. The solution should provide auto generated reports with the findings

**5. Problem statement number: RD005**

- i. Description:** Design and Develop Solutions for Handling of Anti Forensic Issues
- ii. Indicative Scope of Work:**
  - a. The solution should crack Passwords/PIN/Pattern of Mobile handsets/Tablets (android/iOS etc.) PCs/Computer Systems Screen
  - b. The solution should decrypt the encrypted files (which includes PIN/Password encrypted files) and protected files

**6. Problem statement number: RD006**

- i. Description:** Design and Develop Solutions for Data Recovery from Computer Systems, Mobile Devices and other electronic peripherals
- ii. Indicative Scope of Work:**
  - a. The solution should provide recovery of lost data from various storage media including hard disks, solid state drive, USB, laptop or desktop internal hard drive, Flash drive, Memory or SD cards, Digital Camera, CDs or DVDs, Smartphones, Tablets, iPhones, Android OS, Backup drive etc.
  - b. It should recover the files which are accidentally deleted or lost due to virus attack, hard drive failure, or for any other reason.
  - c. It should recover different types of files like Image files, Text files (word, pdf, excel etc.), audio, video, contacts, emails, etc.
  - d. The solution should support all popular operating systems (Windows, Linux, Mac, Android, iOS etc.)
  - e. The solution should support different file systems like FAT, exFAT, NTFS, NTFS5, Ext2/Ext3/Ext4, HFS+, ReFS.

**7. Problem statement number: RD007**

- i. Description:** Design and Develop Solution for Culprit Profile Generation using OSINT Techniques
- ii. Indicative Scope of Work:** Cyber Criminals are using internet (Surface, Deep and Dark Networks) as mean and target for executing their crimes. In this



regard cybercriminal tracing, tracking and collecting their digital footprints are very important to LEAs

- a. The solution should focus on tracking, tracing and collecting of cyber-criminal information like Name, Email, Phone Number, User IDs, Photo and Video etc.
- b. The solution should scan & search other associated data from publicly available records from internet (Website, Social media sites, Blogs, Feed etc.) and create summary report against the target/suspect user.
- c. The solution should use OSINT, SOCMINT and SIGINT techniques for tracking and tracing the cybercriminal.

**8. Problem statement number: RD008**

- i. **Description:** Design and Develop tools for Tracking & Tracing Fake Profile(s) & Fake News
- ii. **Indicative Scope of Work:** Cybercriminals are creating fake profile and carry out crimes like obscenity/defaming/political & religious propaganda on a large scale against individuals or Organizations/Government bodies and they are creating unrest in the society.
  - a. The solution should detect Fake profiles and Similar Fake Profiles across the Social Media and Create Social Media Profiling with detailed metadata of respective UserID and it should be capable to assist the LEAs to trace back the anonymous suspect(s).
  - b. The solution should detect fake news like Offensive Text(Comment, Post, Feeds), Offensive Images(Original or Morphed Pictures) and Offensive Multimedia Videos (Original or Fake Videos) across the Social Media websites using keywords-crawling and indexing, applying APIs, provide Reverse Image techniques using AI/ML/Data Mining methods.
  - c. The solution should trace back original /proximate profiles who posted viral material in internet/social media

**9. Problem statement number: RD009**

- i. **Description:** Design and Develop Solutions for Deep and Darknet Monitoring Capabilities
- ii. **Indicative Scope of Work:**
  - a. The solution should crawl Tor, I2P and other hidden networks and fetch threat intelligence details and make profiling using Darknet data
  - b. The solution should monitor& analyze specific links on regular basis and provide alert when there is a suspicious activity or data traffic moving

- c. The solution should have a provision to generate adhoc and periodic reports

**10. Problem statement number: RD010**

- i. **Description:** Design and Develop an Interactive Web Portal, which provides information on cybercrimes, modus operandi, investigation techniques and standard operating procedures by search engine driven model
- ii. **Indicative Scope of Work:** This portal should provide interactive assistance to cybercrime investigation. Below functionalities should be part of the portal. These are indicative modules, and should be scalable as per requirement:
  - a. It should have a Chatbot (English) facility to assist Investigation Officers with their queries related to cybercrimes (optional).
  - b. It should contain Standard Operating Procedures(SOPs) & Advisory Investigative Documents and other inputs for IO's assistance
  - c. It should have in-built search engine/search functionality- query/semantic search
  - d. The search engine should fetch the details with investigation flow chart/workflows along with step by step procedures
  - e. It should be based on Rule & Role based access system
  - f. It may use AI & ML techniques for on-time updates and query optimization
  - g. It should have report generation features for understanding of web portal utilization using data analytics features
  - h. It should have feedback & query export facility
  - i. It should have provision for the Nodal Officers to place request online for updates of their contact details to Central Administrator
  - j. It should have mail communication facility

**11. Problem statement number: RD011**

- i. **Description:** Design and Develop an Interactive & Integrated Task Driven Online Case Management Platform/Framework for State and Central LEAs & other stakeholders (Nodal Agencies, Intermediaries, etc.) for combating financial frauds
- ii. **Indicative Scope of Work:** It should be a single contact point system for LEAs, Intermediate Nodal Officers of Banks/Wallets/Gateways/ISP/RBI/UPI/NPCI etc.

- a. It should be a workable solution based on rules& role based access control and task driven system
- b. It should have the feature of assigning a particular type of task to respective officers. Users can track the progress of their allocated tasks via a designated case task overview function, designed to provide the user with an up to date list of all tasks assigned to them.
- c. It should allow the users to upload/export and download/import the case related inputs and essential information with respect to the case and it should support time bound tasks handling.
- d. It should have grievance and legal notice assistance export & import mechanism with mailing services
- e. It should provide centralized platform where these communications can take place and it can be tracked.
- f. It should also facilitate information sharing among LEAs. E.g. the details of the recent cases and solution can be posted here.
- g. It should have Advanced Search & Indexing capability
- h. It should have the ability to instantly create a variety of case analytics reports for case initiation, case tracking, case closing and pending status etc. The report documents should be supported through PDF, Microsoft Word, XML, TSV, CSV and HTML etc.

#### 4. Notice Inviting Bid

Request for Proposal (RFP) Document for R&D proposals in the field of cybercrime/security/forensics software development

Project Reference No.: BPRD/R&D Projects/(Problem statement no)

e.g., Project Reference No.: BPRD/R&D Projects/RD001

Mode of Bid Submission	Detailed RFP to be submitted in duplicate as hardcopy to the BPR&D along with a softcopy at <a href="mailto:igmod@bprd.nic.in">igmod@bprd.nic.in</a>
Procuring Entity	IG Modernization, Bureau of Police Research & Development, NH-8, Mahipalpur, New Delhi-110037. Website- <a href="http://www.bprd.nic.in">www.bprd.nic.in</a>
Last Date & Time of Submission of Bid	31 March, 2020
Date & Time of Opening of Technical Bid	01 April, 2020
Contact Details	011 26734874, 011 26734957, 9811648416, 9910761024
Bidding Document Fee	Rs...Nil
Name of the Bidding Institution/Industry	
Contact Person(Authorized Bid Signatory)	
Correspondence Address of Bidder	
Mobile Number of Bidder	
Telephone Number of Bidder	
Email id of Bidder	

## 5. PROFORMA FOR SUBMITTING R&D PROJECT PROPOSAL SEEKING FINANCIAL SUPPORT

### SUMMARY SHEET

1. Problem Statement of BPR&D:
2. Title of the Project :
3. Institution Details
  - a) Name :
  - b) Address :
  - c) Contact No:
  - d) Email :
4. Principal Investigator:
  - a) Name :
  - b) Designation :
  - c) Contact No :
  - d) Email :
5. Details of Co- Investigator
  - a) Name :
  - b) Designation :
  - c) Contact No :
  - d) Email :
6. Objective of the Project :
7. Brief outline of the proposed project with specific technology details :
8. Duration of proposed Project :
9. **A certificate is to be submitted along with the RFP to authenticate originality of the proposed project. The certificate should state that no parallel or past project was ever executed by or sanctioned under GoI funding to the Institution/ Organization or the Principal Investigator in his/her present or past capacity:**
10. Quarter-wise break-up of tangible achievements/milestones :

Milestones	Q1:0-3 months	Q2:4-6 Months	Q3:7-9 Months	Q4:10-12 months	Remark
Details; Milestone 1			→		

Collection of data from various sources			→		
Development of Algorithms			→		
Report Generation and publication				→	

11. Expected final outcome/deliverables from the proposed project

12. Name of other Organizations/Institutions (if any) with whom collaboration is to be made

13. Total Budget outlay as under:

#### Yearly Split-up

SL No.	Heads	Years		Total(Rs. In lakhs)
		1 <sup>st</sup> (Rs. in lakhs)	2 <sup>nd</sup> (Rs. in lakhs)	
1	Equipment			
2	Contingency			
3	Travel			
4	Manpower			
5	Institute Overhead			
6	Other costs			
Grand total				

Signature of Principal Investigator

Designation

Date

Signature of

Head of the Department/Organization

Designation

Date

### Additional Information Required

- I. Brief history of the collaborating Institutions/Organizations including products being made, capacities, related collaborators, achievements, capabilities, etc. may be provided, including recent annual reports and company brochure.
- II. Any other information in support of the proposed proposal.

## **6. DETAILS OF THE PROPOSAL**

### **PART I: BACKGROUND INFORMATION**

1. Title of the Project:
2. Project covered under the given Problem Statement Number:
3. Principal Investigator
4. Co-Investigators of the project with their designations.
5. Brief Bio-data of the Principal Investigator (Please attach separate sheets) and Co-investigators (including publications/patents)
6. Background Information:
  - a) Other commitments of the Principal Investigator and Co-Investigator (including lectures, Research projects, responsibilities etc.)
  - b) Indicate the percentage of time the Principal Investigator and Co-Investigators would devote to the project.
7. Details on each of the ongoing/completed projects within the institution strictly in the area of Cyber Forensics/Cyber Threat or Fraud Detection.
8. Details on each of the ongoing/completed projects with the Principal Investigator:
  - a) Project Title
  - b) Funding Agency (or Internal funding)
  - c) Brief Project Summary
  - d) Technical Status vis-a-vis objectives
  - e) Financial Status (Total Project outlay, expenditure to date)
  - f) Duration and year of initiation
  - g) Expected date of completion
9. Details on each of the ongoing/completed projects with the Principal Investigator/Co-Investigators (in the area of Cyber Forensics/Cyber Threat or Fraud Detection):
10. Infrastructure and other facilities available at the institute for undertaking this project.
11. List of major equipment along with model numbers, specifications etc. :
12. Existing manpower and other personnel, with names, available for the project on fulltime basis
13. Expensive equipment/facilities available elsewhere which could be made use of for the project.
14. Details of collaborating agencies, if any (Specify the Unit/Business Unit/Department of the collaborating Institutes/organizations and name of the Personnel supporting)



15. Additional information, if any.

## **PART II: PROJECT DETAILS**

1. Aim and Scope of the project
2. Detailed description of the Project(Specifically mention the technology)
3. Need, forecast and urgency for the technology proposed to be developed with justification such as importance of know-how, import substitution role, pay off w.r.t. purchase of technology exports, international alliances possibilities etc.
4. Specific manner in which know-how generated here is envisaged to be translated into production, details regarding
  - a) The end product (with specifications to be attained etc.):
  - b) Availability of pilot production facility in the organization:
5. Time period required for completing the project :
6. Details of work already done by the present Investigators/ R&D team from this organization in this or other areas
  - a) Successfully completed on schedule
  - b) Currently in progress
  - c) Abandoned
  - d) Industry interaction/knowhow transferred
7. Summary of similar work being done elsewhere in the Country or outside
8. Information regarding specific tangible achievement milestones (quarter-wise)
  - a) Specific problems, hold-ups and difficulties foreseen in the implementation of the project:
  - b) If the answer is not Nil to 8(a), how does the Principal Investigator propose to overcome them?
9. Detailed PERT/BAR Chart (Separate Sheet)
10. Details of possible alternative arrangements if the Principal Investigator leaves the institution or is unable to continue with the project due to any reason :

### PART III: FINANCIAL DETAILS

**Table – 1 Quarterly Break-up**

Budget requirements for the Year ..... (Please provide separate break-up for each year of the project duration)

SL. No	Heads	Quarters (Rs. In lakhs)								Total (Rs. in lakhs)
		1 <sup>st</sup> Year				2 <sup>nd</sup> Year				
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>	
1										
2										
3										
4										
5										
Grand Total										

**Table - 2 Sub-system wise Break-up**

SL No.	Item description (including test equipment, components, materials)	Total cost(Rs. in lakhs)
1		
2		
3		
4		
Grand Total :		

**Table - 3 Manpower Details**

SL No.	Designation/Scientific/Technical posts	Monthly Salary	1 <sup>st</sup> Year		2 <sup>nd</sup> Year		Total (Rs. In lakhs)
			No. of posts	Total Expenditure	No. of Posts	Total Expenditure	
<b>Total</b>							

## **PART IV: TERMS AND CONDITIONS GOVERNING THE GRANT-IN-AID**

### **I. Applicability**

These terms & conditions apply to the institutions which receive grant-in-aid from the BPR&D for undertaking R&D projects.

### **II. Definition**

In these instructions:

- i. The “institution” means any technical, scientific or academic establishment where research work is carried out through funding by the BPR&D.
- ii. "Inventor" means researcher/employee of the Institution whose duties involves carrying out scientific or technical research work in an R&D project funded by the BPR&D.
- iii. “Intellectual Property Rights" include patents, trademarks, registered designs, copyrights and layout design of integrated circuits.

### **III. General Conditions**

1. The grant is for undertaking the specific project as approved by the BPR&D and shall be subject to the following conditions:
  - i. The grant shall be spent for the project within the specified time
  - ii. Any portion of the grant which is not ultimately required for expenditure for the approved purposes shall be duly surrendered to the BPR&D.
2. For a project being executed with the BPR&D grant, Application by grantee institution for any other financial assistance or receipt of grant/loan from any other Agency/Ministry/Department for the same project should have the prior permission/approval of the BPR&D.
3. The grantee institution is not allowed to entrust the implementation of this project for which grant-in-aid is received, to another institution and to divert the grant-in-aid received from the BPR&D as assistance to the latter institution. However, available Intellectual Property (IP), etc. could be procured with due payment of licence fee as per the recommendations of the Project Review and Empowered Committee.
4. The investigator(s) should not enter into collaboration with a foreign party (individual/academic institution/industry) in execution of this project without prior approval of the BPR&D.

5. The grantee institution(s) shall make all efforts to protect the Intellectual Property Rights (IPR) being generated through the research project and follow the section on “Guidelines for IPR” as laid down by the BPR&D below.
6. The grantee institution, while undertaking the technology transfer/commercialization activities, shall follow the procedure laid down by their own institution. In case there is no such procedure/framework within the grantee institution, a transparent mechanism, based on the guidelines indicated below at the section “Guidelines for Technology Transfer/Commercialization” shall be followed.
7. In case, the grantee institution does not license the patent/ commercialise the technology within a period of 5 years from the time of obtaining the patent/ development of technology, the grantee institution will make available the patent/technology in public domain for usage by Indian companies/MSMEs/startups/entrepreneurs/citizens.
8. The Grantee institution should indemnify the BPR&D from any legal and/or financial encumbrance arising out of any infringement of IPR/ licensing of IPR/ technology transfer/ commercialization.
9. In any dispute on any matter related to the implementation of the project, the decision of the BPR&D shall be final and binding on the grantee institution.
- 10. The BPR&D shall NOT be responsible for giving permission on APIs, Web Plugins, Honeypots/bots, and Integration of Third Party Tool(s), etc.**
11. The BPR&D reserves the right to modify these terms and conditions governing the grant-in-aid from time to time reflecting the directions of the Government of India.

#### IV. Monitoring & Review of the project

The BPR&D shall appoint a Project Review and Empowered Committee comprising of representatives from the BPR&D and other experts to periodically review and monitor the technical and financial status of the project. The Project Review and Empowered Committee will periodically monitor the project in all respects, including technical and financial progress of the project.

#### V. Acquisition & Management of Assets

1. The grantee institution shall maintain an audited record in the form of a register in the prescribed proforma for permanent, semi-permanent assets acquired solely or mainly

out of the BPR&D grant. The applicable procedures for procurement shall be followed for acquisition of assets.

2. The assets referred to above will be the property of the BPR&D and should not, without prior sanction of the BPR&D, be disposed of or encumbered or utilised for the purposes other than those for which the grant has been sanctioned.
3. The grantee institution shall send a list of assets referred to above to the BPR&D at the end of each financial year as well as at the time of seeking further instalments of the grant.
4. Should at any time the grantee institution cease to exist, such assets, etc., shall revert to the BPR&D.
5. At the conclusion/termination of the project, the Government of India will be free to sell or otherwise dispose of the assets which are the property of the Government. The Institution shall render to the Government necessary facilities for arranging the sale of these assets. The Government of India has the discretion to transfer the assets to the concerned institution or any other institution, if it is considered appropriate.

#### VI. Utilization of Grants and Audit

1. The grantee institution should maintain separate audited account for the project. If it is found expedient to keep a part or whole of the grant in a bank account earning interest, the interest, thus earned, should be reported to the BPR&D. The interest so earned will be treated as a credit to the grantee institution to be adjusted towards future instalments of the grant; the BPR&D or its nominee/s will have the right of access to the books and accounts of the grantee institution for which a reasonable prior notice would be given;
2. The grantee institution shall render an audited statement of accounts and utilization certificate to the BPR&D, every year. The audited statement of accounts relating to grants given during the financial year, together with the comments of the auditor regarding the observance of the conditions governing the grant, should be forwarded to the BPR&D within six months following the end of the relevant financial year;
3. The utilization of grant for the intended purposes will be looked into by the Auditor of the grantee institution according to the directives issued by the Government of India at the instance of the Comptroller and Auditor General and specific mention about it will be made in the audit report;

4. The grantee institution shall render progress-cum-achievement reports at intervals of not exceeding six months on the progress made in all aspects of the project, including the expenditure incurred on various approved items during the period.
5. The grantee institution will refund the unspent balance, in addition to the interest, if any, accrued on the unspent balance in the total outlay of the project.
6. **The grantee institution will refund the total amount paid to them with penal interest at the simple rate of 18%, in case they fail to meet the scope of work, or there are unapproved project deviations or for providing unworkable solution(s)/modules.**
7. The BPR&D will be at liberty to take appropriate action under Rule 238(1) of the GFR, 2017, relating to utilization of funds in the specified time and, where such a certificate is not received from the grantee within the prescribed time (reference: General Financial Rules, 2017).

VII. Guidelines for managing IPRs:

1. The IPR arising out of the sponsored project(s) will be with the grantee institution(s). While the patent may be taken in the name(s) of inventor(s), the institution(s) shall ensure that the IPR is assigned to institution(s). In cases where the funding/resourcing of researchers has been done jointly with other organizations, the IP Rights would be appropriately shared among them.
2. The Government of India/Govt. bodies ( including PSUs, Govt. Autonomous Societies & Section 25 companies) shall have right to obtain a royalty- free licence for the Intellectual Property for deployment/use of the same for non-commercial purposes. However, in case, IP is proposed for commercial usage, the terms of licensing may be mutually agreed to with the grantee institution(s) possessing the IPR.
3. The grantee institution shall submit the financial requirements for filing of IPR as part of the R&D proposal. The contingency fund could be used for provisioning of the expenditure for filing of IPR with a ceiling of Rs. 15 Lakh for the cost of initial filing, but excluding the annuity fee. International Patent filing will be permitted. The amount will be released based on the recommendations of the Project Review and Empowered Committee constituted by the BPR&D for the concerned project. If, for any reason, it is not possible to meet the expenses from the project grant, like in the case of the need for filing of IPR arising after the closure of the project, an application may be made separately by the institution to the BPR&D for sanction/ reimbursement of the expenses incurred in filing of the IPR.

4. The grantee institution shall inform the BPR&D about the patents filed/obtained and IPR arising out of the R&D project on annual basis over the project duration and subsequent 5 years period after the project closure.
5. The grantee institution shall provide information to the BPR&D about trading/selling/ transferring /licensing the IP rights, within a period of 6 weeks from the conclusion of the agreement relating to such a commercial event.
6. The grantee institution shall take appropriate licence in case of export of items as per the prevailing provisions of Foreign Trade Policy from the Directorate General of Foreign Trade, under the Department of Commerce, Govt. of India.
7. As the R& D is supported by public funds, the grantee institution should ensure that the interests of India and its citizens are fully protected, during licensing of patents/transfer or commercialization of technology.
8. The institution is permitted to retain the benefits and earnings arising out of the IPR for plough back to pursue research/research related activities.
9. Notwithstanding the above, the BPR&D reserves the right to take over ownership of the rights of the Intellectual Property arising out of this project, in the interest of Indian sovereignty, without any compensation to the grantee institution.

#### VIII. Guidelines for Technology Transfer/Commercialization:

The Grantee institution may use the following guidelines in case there is no laid down procedure within their own institution:

1. The transfer of technology may normally be undertaken by the central office of the grantee institution equipped to handle legal issues with regard to technology/IP licensing.
2. The grantee institution shall constitute a Transfer of Technology (ToT) Committee for evaluation of the applications for ToT and for working the appropriate revenues expected out of the ToT.
3. Prior to seeking the expression of interest for technology transfer/commercialization, there should be sufficient disclosure of the technical details, features and capabilities of the project through advertisement, publication on the websites of the Institution and of the BPR&D, and exhibitions, if any, held on related themes during the relevant period. The ToT proposal may be given wide publicity in one national daily besides in journals relating to the theme and by writing to the industry associations related to the theme.



4. Normally, a period of 6 weeks shall be given to interested parties to file their applications relating to Expression of Interest. A format for the application is attached as Annexure-I, which may require customization, based on the technology/product/service/prototype proposed to be transferred by the grantee institution.
5. The ToT Evaluation Committee shall undertake a techno-commercial evaluation of the proposals received, adopting a 2-stage process.
6. The ToT Committee formed by the grantee institution will work out the cost of ToT on a case-to-case basis, considering the ground realities, like i) development cost of the project ii) market demand for the technology/product iii) ability of the industry to pay for the technology iv) work involved from prototyping to packaging. The cost of capital equipment will be excluded from the total cost of development. Such an estimated cost shall be used as the Internal Bench Mark (IBM) for evaluating the ToT fee and royalty, in Stage 2.
7. After due diligence by the ToT Committee, a Technology Transfer/Licensing Agreement shall be signed which shall include licence of IPRs through existing legal procedures.
8. It is desirable that technology be transferred on a non-exclusive basis. Exclusive licensing should be in the rarest of rare cases based on sufficient justification by the Tot Evaluation Committee and approval by the Head of the institution/ Competent Authority and with the approval of the BPR&D.
9. The institution is permitted to retain the benefits and earnings arising out of the technology transfer/ licensing of IPRs for ploughing it back to pursue research/ in related areas.

IX. Guidelines for Publication of Results

1. Investigators wishing to publish technical/ scientific papers based on the research work done under the project, should acknowledge the assistance received from this Department and a copy of the communicated/published paper be sent to the BPR&D.
2. If the results of research are to be legally protected for the intellectual property, its publication can be undertaken only after due care is taken for legal protection of the intellectual property rights.

**Note:**

1. While submitting the project proposal, a certificate of acceptance of terms and conditions and undertaking to follow the guidelines as above needs to be given by the Principal investigator and endorsed by the competent authority of the institution. For any deviation from the terms & conditions and guidelines, the grantee institution will take the permission/approval of the competent authority of the BPR&D.
2. The guidelines for managing IPR and Technology Transfer/Commercialization will not be applicable for the following exceptions and specific approvals have to be taken in respect of IPR and ToT:
  - i. R&D projects of strategic applications
  - ii. The projects jointly funded by/for strategic departments like defence, space and atomic research, etc.

**ANNEXURE-I (Ref. VIII –Guidelines for Technology Transfer/Commercialization  
para-4 of Terms & conditions governing grant-in-aid for funding the R&D  
Projects)**

The following details should be submitted along with Expression of Interest (EOI).

**Part-A**

A.	<b>Company Profile</b>
1.	Name of the Organization: Website
2.	Name of the Contact Person:  Name:  Address  Telephone:  Fax:  E-Mail:
3.	Year of Incorporation
4.	Type of Organization a. Public Sector/ Limited/Private Limited/ Partnership/ Proprietary/ Society/ Any other b. Whether 'Foreign Equity Participation (Please give name of foreign equity participant and percentage thereof) c. Names of Directors of the Board/Proprietors d. Name and Address of NRI(s), if any
5.	Category of the Firm: Large/Medium/Small scale unit
6.	Address of the Registered Office:
7.	Number of Offices with addresses (Excluding Registered Office):  India  Abroad

8.	Certificate of registration as a manufacturing unit
9.	Permanent Account Number
10.	Sales Tax Number/ VAT
11.	Status of ISO9001/ISO13485 Certification

**Technical Collaborations:**

<b>B.</b>	<b>ESSENTIAL REQUIREMENTS</b>
1.	The organization must be a reputed firm/ company/SME/startup/R&D company incorporated in India.
2.	The turnover is to be supported by financial statements of accounts/Annual reports duly certified by a Chartered accountant/ Balance sheets of last 3 years/ Income tax returns for the last 3 years period.
3.	Company profile, giving details of current activities and management/personnel structure including evidence of incorporation. The company should be registered and ISO 9001/ ISO13485 or equivalent certified.
4.	Details of absorption of technology for a product/ knowhow that has been taken up on production scale in the past may also be given
5.	<p>The manpower strength (Technical: Mechanical, Electrical, Electronics, Software &amp; Non-Technical etc. ) at various levels to be furnished</p> <p>Technical:</p> <ul style="list-style-type: none"> <li>a. B.E./ B.TECH/PhD</li> <li>b. DIPLOMA</li> <li>c. SKILLED TECHNICIANS</li> <li>d. UNSKILLED</li> </ul> <p>Non-technical:</p>
6.	The list of machine tools /equipment/software/facilities available related

	with work to be furnished.
7.	The in-house technological expertise available to be furnished
8.	The list of equipment available for inspection and quality control to be furnished.
9.	The industry should have adequate space for undertaking this work. Available space- Covered & Open to be furnished.
10.	List of products/technologies worked with as regular activity in last three years. Give the list of products/technologies with general specifications and the customers.
11.	List of PSUs/ Govt. customers – with contact details (Address, Telephone .no., Contact Person)
12.	The details of sales, marketing and maintenance network to be furnished.
13.	The list of technical collaborators for various ongoing products maybe furnished.
14.	The bidder shall provide details of the sub-vendors in case they propose to employ for Part-work.
<b>C.</b>	<b>Expression of Interest: Spell out the extent of interest</b>
<b>D.</b>	<b>The ToT will be done stage-wise: The preferred stages may be furnished.</b>
<b>E.</b>	<b>The ToT fee and royalty, payment schedule</b>

I hereby declare that the above information is true to the best of my knowledge.

Signature with Name & Seal:

Place:

Date:

## PART V

### Endorsement by the Head of the Institution

1. I have read the terms & conditions given at PART IV of this document governing the grant-in-aid and I agree to abide by them.
2. I certify that I have no objection to the submission of this research proposal for consideration by the Bureau of Police Research and Development.
3. In case, the project is approved, I undertake to make available facilities to carry it out, to arrange for the submission of periodic progress reports and other information that may be required by the Bureau of Police Research and Development and, in general, to ensure that the conditions attached to the award of such grant are fulfilled by my institution/organization.
4. I certify that, in case the present Principal investigator is not available, for any reason, to continue work on this project, the following persons will be available to carry it through to completion:

SL. No.	Name	Designation
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1.

2.

5. I certify that the facilities mentioned in the body of this report are available at my institution.
6. I certify that I shall ensure that accounts are kept of the funds received and spent and made available on demand, as specified and required by the Bureau of Police Research and Development.
7. I certify that I am the competent authority, the virtue of the administrative and financial powers vested in me by .....to undertake the above stated commitments on behalf of my institution.

Signature of the

Head of the Institution

Designation

Date: