Science and Technology Entrepreneurs' Park Kharagpur

Science and Technology Entrepreneurs' Park
Indian Institute of Technology Kharagpur

Category I: Proof of Concept/ Prototypes/ Models

Application Form

1. Title of the proposed project: Vibelink : A Love connection

2. a. Name of the applicant : Irfan Ansari
   b. Father's name/Husband's name: Jamal Uddin Ansari
   c. Postal Address:

   - Present Address:
     Patkai men's hostel, Tezpur University, Sonitpur, (784028)
   - Permanent Address:
     Keshwari, Suriya, Giridh, Jharkhand, (825320)

   N.B:

   1. *Please provide Pin Code, Telephone numbers, mobile number and e-mail address*
   2. *Please enclose residence certificate issued by Sub-Divisional Magistrate(SDM)/District Magistrate(DM) or a copy of ration card or any other document regarding proof of residence*

   d. Address of Institute/Organization:

   (For Students and working Innovator, No Objection Certificate from Head of Institute /Organization is required)

   e. Profession of the applicant *(Please tick √ as applicable)*
   ☐ Housewife ☑ Student ☐ Farmer
   ☐ Any other _____ (specify)

   f. Date of Birth: 08/01/2024
   YY/MM/DD

   g. Educational qualification: Completed Diploma in Electrical Engg, Now Pursuing B Tech CSE (3rd year)

   h. Annual Income of the applicant: ₨5,000
   (If you are an Income Tax Payer, please provide your PAN No. and attach a copy of the latest Income Tax Returns you filed)

   i. PAN No.- DRTPA1206B

   j. Aadhaar No. - 8701 1716 9512

3. Brief description of the idea highlighting innovative element.
   (Please use a separate sheet)

4. (a) Status of work already carried out (if any) such as

- □ participation in competition
- □ making a model
- □ provisional application for patent
- □ paper presentations
- □ publication
- □ college project
- □ Any other

(b) Science and working principle behind the idea
(c) Final outcome/deliverable of the project
(d) Who would be the beneficiary of this innovation and why?
(Please use a separate sheet)

5. Proposed costs and time frame

Sl. no.	Items	Project Cost	
i	R&D/Design Engg / Consultancy	25,000	00
ii	Raw materials/ consumables/ spares	25,000	00
iii	Fabrication /synthesis charges of working model /process	40,000	00
iv	Patent filing cost (actual fee paid to patent office)	60,000	00
v	Any other	30,000	00
	Total Cost	1,80,000	00

6. Activity details/work plan

Sr. No.	Activities	Monitor-able milestones	Duration (months)
1.	Prototype Development		2 months
2.	Custom PCB Design & assembly		3 "
3.	Enclosure Design & Integration		2 months
4.	Final Testing & Refinement		2 months

Note: Duration of the project should not be more than 9 months.

7. **Declaration:**

I declare that all the statements made in this application are true, complete and correct to the best of my knowledge and belief. In the event of any information, found false or incorrect, my candidature will stand cancelled and all my claims will be forfeited. I have not received any financial assistance for the present proposal from any other agency.

Irfan Ansari

Place: Tezpur University **Signature of the applicant**

Date: 15/11/2024

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Terms & Conditions for the projects considered under Category I/II

Name of the project - Vibelink : A Love connection
Name of the applicant - Irfan Ansari
Approved Project Cost - ₹ 1,80,000
Duration of the project - 9 months

FINANCIAL CONDITIONS:

1. Approval of the sanctioned project and the amount being provided there for is for the specific project sanctioned and the amount approved should be exclusively spent on the project within the project period. Any unspent balance out of the amount sanctioned must be surrendered to the STEP, IIT Kharagpur.
2. The project will become operative w.e.f. the date on which the first financial sanction is issued by the STEP, IIT Kharagpur.
3. The amount received from the STEP, IIT Kharagpur would be kept in a separate no interest account, the details of which shall be intimated to the STEP, IIT Kharagpur. Transactions from the account shall only be for the purpose of the approved project. It is necessary that separate audited books of accounts be maintained for the expenditure incurred on the project and these books should be freely available to Government Auditors whenever required by them.
4. For permanent and semi-permanent assets, acquired wholly or partly out of the grant, an audited record should be maintained in the form of a register which should be made available to Government Auditors whenever demanded. The term "assets" will mean: (i) all immovable property; and (ii) movable property of a capital nature where the value exceeds Rs.10,000/-. The amount will not be utilized for construction of any building / acquiring land by purchase, lease etc / permanent asset like machinery required for augmenting general production facilities. Pilot plants, test equipments, test rigs, jigs, tools and fixtures, etc required for building prototypes and testing the same can, however, be built/made/acquired out of the grant, if so identified in the approved project proposal or subsequently approved by the STEP, IIT Kharagpur.
5. The assets, if any, wholly or partly acquired out of the STEP, IIT Kharagpur amount during the course of implementation of the project, shall not be disposed off without the specific written permission of the STEP, IIT Kharagpur. The sale proceeds, if any, arising out of such disposal shall be intimated to the STEP, IIT Kharagpur and shall be deposited in the account maintained for the amount received from the STEP, IIT Kharagpur.

   The above mentioned assets acquired from the amount released by the STEP, IIT Kharagpur will be deemed to be owned by the Innovator only after the project is declared successful by the IIT Khargapur.

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TRANSFERABILITY OF THE PROJECT:

6. While the whole project cannot be transferred to any other organization, a part of the work of the project can be sub-contracted, based on needs, to a research institute or industrial unit, in which case the payment made to such organization shall be on the basis of the quantum of work done for the project without seeking any further escalation in the STEP, IIT Kharagpur's financial support in the sanctioned project.

MONITORING:

7. The project will be periodically monitored through a group of experts nominated by the STEP, IIT Kharagpur.

USE AND LICENSING OF KNOW HOW:

8. Ownership of the IPR generated through the project, patent rights, licensing the know-how and the use of the know-how generated through the project shall be shared with IIT Khargapur for projects above or equals to 5 Lakh. However, STEP, IIT Kharagpur does not own any responsibility of disputes arising out of the IPR issues.

REPORTING:

9. It is required that Statement of Accounts duly audited by a Chartered Accountant, should be sent to the STEP, IIT Kharagpur whenever required by STEP, IIT Kharagpur.
10. A Completion Report shall be submitted to the IIT Khargapur within 30 days from project conclusion date. The report must consist of technical report and financial statement with consolidated audited statement of account on spent amount in the fund that is received from STEP. Financial statement should contain certificate from a authorized auditor..

ESCALATION:

11. Any escalation in the cost of the project above the approved cost of the project will be borne by the innovator and not by STEP, IIT Kharagpur.

TERMINATION OF THE PROJECT:

12. The STEP, IIT Kharagpur will have the right to terminate / close the project at any stage

    - if it is convinced that the monies released have not been properly utilized, or
    - appropriate progress on the project is not being made, or
    - the project is not being carried out as per the terms and conditions and / or as per the nature and scope of the work as defined in the approved project proposal.

    In case of termination of the project for not proper utilization / unsatisfactory progress of the project / violation of terms as given above, the entire amount of the grant and the amount received by disposal of the assets will be returned to STEP, IIT Kharagpur.

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In case of abandonment of the project by the beneficiaries they have to return the entire funds disbursed to STEP, IIT Kharagpur.

If the project is abandoned for any techno-economic or any reason other than the above, based on the recommendations of the monitoring committee set up by the STEP, IIT Kharagpur, the unspent money from the STEP, IIT Kharagpur amount released to the project and / or any amount recoverable by way of disposal of assets procured out of funds released by the STEP, IIT Kharagpur shall be paid back to the STEP, IIT Kharagpur.

MODIFICATION OF TERMS & CONDITIONS:

13. The above terms and conditions may be modified by the STEP, IIT Kharagpur through Mutual agreement.

Share Holding Pattern:

14. For projects below 2 lakh there will not be any equity
15. For projects between 2 lakh and 5 lakh share holding may be 2.5% to 5 %.
16. For projects between 5 lakh and 10 lakh share holding may be 5% to 8 %.
17. For projects above 10 lakh share holding may be 8% to 10 %.

UNDERTAKING OF THE INNOVATOR AND / OR COLLABORATING / SPONSORING ORGANISATION

I / We agree to the above terms and conditions in connection with STEP, IIT Kharagpur grants to our project concerning
"Vibelink".

Name : Irfan Ansari

Irfan Ansari
Signature

Designation and Organization: **Individual Innovator**
(If representing the sponsoring organization)

Place:Kharagpur
Date:

(a) Brief Description of the Idea Highlighting the Innovative Element

The concept revolves around a pair of connected lockets designed for lovers to foster a sense of presence and connection over long distances. Each locket is equipped with a micro-vibration motor and a Bluetooth module, enabling communication with a mobile app. When a button on one locket is pressed, a signal is sent via Bluetooth to the connected smartphone, which relays the signal over the internet to the paired partner's device. This triggers the vibration in the second locket, creating a tactile and intimate reminder of their partner's presence, no matter how far apart they are.

Innovative Elements:

1. **Physical Interaction Across Distance:**
   Transforms a button press into a physical sensation, creating an emotional connection across vast distances.
2. **Integration of Bluetooth and Internet:**
   Combines local Bluetooth communication with internet-based long-range interaction for seamless connectivity.
3. **Compact Wearable Technology:**
   Aesthetic and functional design ensures the technology is housed within a fashionable, wearable locket.

This idea innovatively blends technology with personal relationships, creating a meaningful way to maintain emotional bonds in real time.

(b) Science and Working Principle Behind the Idea

1. Bluetooth Technology:

Each locket contains a Bluetooth module (e.g., ESP32 or HC-05), which enables wireless connection to a smartphone. Bluetooth operates over short distances (typically up to 10 meters) and is ideal for wearable devices due to its low power consumption.

2. Button Activation:

A physical button on the locket serves as the input mechanism. When pressed, the locket's microcontroller (e.g., ESP32) detects the input and sends a signal to the connected smartphone via Bluetooth.

3. Mobile App Communication:

The smartphone app, connected via Bluetooth, sends a signal over the internet to a remote server. The signal includes the identification of the paired locket and the button press event. It also receives messages from the server when the paired partner's locket is activated.

4. Internet-Based Data Relay:

A backend server hosted on a cloud platform acts as the intermediary, receiving and relaying messages between paired smartphones. It ensures secure and reliable communication.

5. Vibration Motor Activation:

When the paired partner's smartphone receives a signal, it sends a Bluetooth command to its connected locket, activating the micro vibration motor. This creates a tactile response—a gentle vibration, symbolizing the partner's thoughtfulness.

6. Power and Efficiency:

The lockets are powered by rechargeable Li-ion batteries. The microcontroller and Bluetooth module operate in low-power modes when idle, conserving energy. The vibration motor and communication systems activate only during a button press, ensuring efficiency.

(c) Final Outcome/Deliverables of the Project

The project aims to deliver:

1. **Smart Locket Hardware:**
    - Compact wearable locket with:
        - Micro-vibration motor for haptic feedback.
        - Bluetooth module for smartphone connectivity.
        - Physical button for user interaction.
        - Rechargeable battery with efficient power management.
        - Custom casing for aesthetics and comfort.
2. **Mobile Application (iOS and Android):**
    - User-friendly app with features to:
        - Connect to the locket via Bluetooth.
        - Send signals over the internet upon button press.
        - Trigger vibration in the paired locket.
        - Provide pairing options and display battery status.
3. **Cloud-Based Server Infrastructure:**
    - A backend server for secure and reliable data relay between paired lockets.
4. **Technical Documentation:**
    - Comprehensive documentation covering:
        - Hardware schematics and specifications.
        - Software architecture for the mobile app and server.
        - Instructions for assembly, usage, and troubleshooting.
5. **Prototype Testing and Evaluation:**
    - Functional prototypes tested for:
        - Usability, durability, and communication reliability.
    - User feedback for optimization and refinement.

Potential Future Deliverables:

- Customization options for locket designs.

- Additional features like LED indicators, gesture-based interactions, or location tracking.

(d) Beneficiaries of This Innovation and Why

1. Long-Distance Couples:

- **Why:** Helps couples feel connected by translating a button press into a physical sensation, offering emotional comfort and strengthening bonds.

2. Family Members:

- **Why:** Provides a tactile reminder of connection for families separated due to work, education, or other reasons.

3. Close Friends:

- **Why:** Offers a unique and private way for friends to stay emotionally engaged.

4. Individuals in High-Stress or Isolated Environments:

- **Why:** Ideal for people in isolated or stressful situations, providing a sense of support from loved ones.

5. Wearable Tech Enthusiasts and Early Adopters:

- **Why:** Combines emotional connectivity and technology in a stylish wearable form.

6. Gift Market:

- **Why:** A meaningful and personalized gift for special occasions like anniversaries, birthdays, or holidays.
