



Department Of Electronics and Telecommunication Engineering

Pitch Deck

**Audio And Data Transmission Using LI-FI Technology For
Wireless communication industries by Li-Fi-Connect**

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Problem

As the demand for high-speed data in wireless communications increases day by day with the significant increase of the number of users, Radio Frequency (RF) spectrum become one of the scantest resources in the world. RF technologies have limitations of the regulated spectrum, spectrum congestion, expensive licensing, low bandwidth and low-speed broadband connection.

Solution

- Audio And Data Transmission Using Li-Fi-Connect Technology is the current Wireless communication Industry.
- The available huge visible light communication (VLC) spectrum band ranges from 428 THz to 750 THz. So the new wireless technology known as light fidelity (Li-Fi) has become a new source for communication of data and it has been alternative to the existing radio frequency(RF) wireless communication technology which uses visible light as a medium to deliver high-speed data communication. Li-fi is an optical wireless communication technology which utilizes light emitted from Light-emitting diode bulb for simultaneous transmission of text and audio signals.

Market Validation

- Audio And Data Transmission Using Li-Fi Technology provides a complete solution to the current industry gaps by Wireless communication Industry.
- Li-Fi-connect for audio and data transmission presents an exciting opportunity in the wireless communication market. We have conducted extensive market validation to assess the potential demand and viability of our Solution.
- Based on these market validations, our Li-Fi technology for audio and data transmission is poised to disrupt the wireless communication market, catering to the increasing demand for high-speed, secure, and reliable wireless solutions.

Market Size

- Audio And Data Transmission Using Li-Fi-Connect Technology including local, regional, and global markets.
- The potential customer base includes Education, Entertainment Industry and also Home Automation. These sectors have a broad category of customers, ranging from small industry to large scale industry, also hospitals etc.

Product

- The system has two units and its features are-
- A) Android programming: Build android programming.
- B) Hardware component:
 - 1. Arduino uno : It is a microcontroller board based on the ATmega328P. It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz ceramic resonator (CSTCE16M0V53- R0), a USB connection, a power jack with 128KB RAM, 4MB Flash and etc.
 - 2. Bluetooth (HC05) : HC05 is a Bluetooth module which is designed for wireless communication.
 - 3. LED: 3mm Light Emitting Diode.
 - 4. Photo Detector: Photodetectors are sensors that can convert the photon energy of light into electrical signal.
 - 5. LCD: 16*2(Liquid Crystal Display).
 - 6. Speaker: Audio Speaker.

Market Adoption

- Audio And Data Transmission Using Li-Fi-Connect Technology is designed to be Simple and straightforward to use, making it easy for users to adopt.
- By Wireless communication , the system saves time and eliminates errors, which is beneficial to both the Wireless communication and users also.

Competition

- Audio And Data Transmission Using Li-Fi-Connect Technology is the current Wireless communication Industry.
- As the demand for high-speed data in wireless communications increases day by day with the significant increase of the number of users, Radio Frequency (RF) spectrum become one of the scantest resources in the world.

Team

- The team consists of 3 experienced professionals as the partners namely Rohit Bobade and Sarvash Mali who have expertise in Electronics and Telecommunication, Yashodeep Deshmukh expertise in Information Technology respectively.
- The team is mentored by Prof. Nilima S. Warade having expertise in Electronics and Telecommunication Business management.

Conclusion

Li-Fi-Connect addresses the limitations of traditional wireless communication technologies by offering a high-speed, secure, and reliable solution through Li-Fi technology. With market validation and a global market opportunity, our products cater to the diverse needs of customers across various industries. We are confident in the market adoption of our innovative products, as they provide a unique value proposition and stand out from competitors. Supported by a skilled team and industry experts, Li-Fi-Connect is poised for success in meeting the growing demand for faster, more secure audio and data transmission solutions.