

A Method and System for Optimal Emergency Communication



**INTELLECTUAL
PROPERTY INDIA**
एकता/PATENTS/अधिकार/DESIGNS/
उपकरण/TRADE MARKS/औद्योगिक
उपकरण/GEOGRAPHICAL INDICATIONS



संघीय गणराज्य

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भारत सरकार
GOVERNMENT OF INDIA

सं. \ No. 599/MUM/2013

दिनांक \ Dated the 13/03/2024

सेवा मे, \ To :

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विषय :- पेटेंट आवेदन संख्या 599/MUM/2013 के संबंध में अधिनियम की धारा 43 के तहत पेटेंट अनुदान तथा पेटेंट रजिस्टर में प्रविष्टि की सूचना
Sub - Intimation of the grant and recordal of patent under section 43 of the Act in respect of patent application no. 599/MUM/2013

महोदय/महोदय,
Sir/Madam,

आपको सूचित किया जाता है कि पेटेंट अधिनियम, 1970 की धारा 12 व 13 तथा उस आधार पर बने नियम के तहत उपर्युक्त पेटेंट आवेदन के परीक्षण [ब 25/01/2024 को हुई सुनवाई] के उपरान्त एतद्वारा पेटेंट अनुदान किया जाता है। तथा पेटेंट अनुदान की प्रविष्टि 13/03/2024 को पेटेंट रजिस्टर में कर दी गयी है।

This is to inform you that following the examination of above mentioned patent application under section 12 and 13 of The Patents Act, 1970 and Rules made thereunder [and hearing held on 25/01/2024] a patent is hereby granted and recorded in the Register of Patents on the 13/03/2024. The Patent Certificate is enclosed herewith.

पेटेंट संख्या \ Patent No	: 524607
आवेदक का नाम \ Name Of Applicant	: 1.ANAND SUNDARARAJ 2.RAJESH SUDHAKAR THAKUR
पेटेंट दिनांक \ Date of Patent	: 28/02/2013
प्राथमिकता तिथि \ Priority Date	: 28/02/2013
परीक्षण हेतु अनुरोध दाखिल करने की तिथि \ Filing Date of Request for examination	: 27/02/2017
शीर्षक \ Title	: "A METHOD AND SYSTEM FOR OPTIMAL EMERGENCY COMMUNICATION"
दावों की संख्या \ Number of claims	: 1-20
Controller' Name	: Samarjit Dixit
Controller' Email	: samarjit.ipo@gov.in
Controller' Location	: Kolkata

उपर्युक्त पेटेंट के अनुदान का प्रकाशन अधिनियम की धारा 43 के तहत पेटेंट कार्यालय के अधिकारिक जर्नल में किया जाएगा।
The grant of above mentioned patent will be published in the Official Journal of the patent Office under section 43 of the Act.

पेटेंट अधिनियम 1970 यथा संशोधित पेटेंट (संशोधन) नियम, 2005/ पेटेंट नियम, 2003 यथा संशोधित पेटेंट (संशोधन) नियम, 2016 की धारा 142 की उप-धारा (4) के प्राधान्यों के तहत उपरोक्त प्रविष्टि की तिथि से 3 माह के भीतर इस कार्यालय में नवीकरणीय शुल्क जमा किया जाना चाहिए।
The payment of renewal fee is required to be made at this office within three(3) months from the aforesaid date of recording according to the proviso in sub-section(4) of Section 142 of The Patents Act,1970, as amended by The Patents (Amendment) Act, 2005 / The Patents Rules, 2003 as amended by The Patents (Amendment) Rules, 2016.

Samarjit Dixit
(निर्वाहक पेटेंट)
Controller of Patents

टिप्पणी / Note :

- संशोधित नवीकरणीय शुल्क हेतु कृपया महानिर्वाहक पेटेंट, अभिकल्प एवं व्यापार चिह्न की आधिकारिक वेबसाइट www.ipindia.gov.in पर उपलब्ध पेटेंट (संशोधन) नियम 2016 की प्रथम अनुसूची (शुल्क) देखें।
- For revised renewal fees kindly refer to the First Schedule (fees) of The Patents (Amendment) Rules 2016 available on the official website of Controller General of Patents, Designs and Trade Marks www.ipindia.gov.in
- कार्यालय द्वारा पेटेंट प्रमाणपत्र की कोई भी कालगी प्रति अलग से जारी नहीं की जाएगी।
No hard copy of Patent Certificate shall be issued separately by the office.

1. Executive Technology Overview

Patent 524607 covers an integrated emergency-communication architecture designed to improve the probability that an emergency request and associated information reach an appropriate response agency. The granted claim set contains method claims and an independent system claim. The architecture combines emergency activation, user identification/authentication, capture of audio/video and sensor information, communication-path selection, agency routing, local preservation of information, repeated connection attempts and fallback connectivity.

The invention is therefore positioned as an **end-to-end resilient emergency communication architecture**, rather than as a conventional panic button or standalone emergency call feature.

Core technical proposition

Emergency event → identify/authenticate requester → activate capture and sensors → evaluate connectivity/protocol → determine emergency agency → establish communication → preserve/retry if connectivity fails → use satellite fallback where required → transmit buffered information → support police/medical response → manage interruption, redial and disconnection.

This presentation is intended for technology licensing, strategic partnerships, commercialization and patent-marketplace diligence.

2. Patent Control Record

Field	Record
Patent	Indian Patent No. 524607
Application	599/MUM/2013
Title	A Method and System for Optimal Emergency Communication
Filing / priority date	28 February 2013
Grant date	13 March 2024
Granted claims	1–20

The official grant record identifies Patent No. 524607, application 599/MUM/2013, the title, date of patent 28/02/2013 and the 20-claim grant record dated 13/03/2024.

3. What the Granted Method Covers

1. Register at least one user in a user database.
2. Set up an emergency response request and activate input-capture devices including picture/video cameras, microphone and sensors.
3. Initiate the connection process and detect available network coverage and strength.
4. Identify a compatible communication protocol and identify/authenticate the requester at the service-provider server.
5. Decode the emergency request and determine the appropriate agency server; establish connectivity to that agency.
6. Store captured information locally, including a text file for the appropriate agency when standard network coverage is unavailable.
7. Repeatedly execute connection initiation until coverage is available to dispatch the stored information.
8. Establish satellite-phone connectivity after repeated connection failure.
9. For police assistance, transfer buffered video/audio and broadcast requester name, location and audio to police walkie-talkie communication.
10. For medical assistance, identify an appropriate nearby medical agency and make relevant identity, location, multimedia and medical information available.
11. Play recorded emergency messages through the system speaker.
12. Restrict disconnection to the system-server administrator/controller after assistance is satisfactorily managed.
13. Automatically redial after connectivity drops and alert agencies while rendering/continuing relevant data.
14. Activate CR functionality for direct media connectivity.
15. Provide escalation/notification when the device is physically broken or damaged.

The above is a commercial-language summary of the granted method claim; it is not a substitute for the certified claims when determining legal scope.

4. System Architecture — Claim 20

The independent system claim defines a physical and processing architecture corresponding to the method. Key system elements include:

- Multiple servers, server networks, databases, storage units and communication links.
- Power source / DC power, display drivers and status LEDs.
- IR LED and IR detector for night vision, plus visible-spectrum laser LED for emergency-light indication.
- Multiple key buttons for activation and user inputs.
- Microphone, speaker, audio processor and onboard eMMC memory.
- Picture cameras and a rotating/wide-angle video camera.
- Multiple processors supporting HD video and communication paths such as Ethernet / PCI / SPI.
- Satellite transceiver module for wireless emergency communication.
- Multiple sensors.
- Central processing unit with connectivity module supporting communication protocols, display/camera interface, imaging processing, internal memory, system control, multimedia, cache and power-management functions.

5. Differentiating Technology Themes

Resilient communication — The architecture does not depend solely on one network. It contemplates standard connectivity, repeated connection attempts, local preservation and satellite fallback.

Multimedia emergency context — Emergency activation can trigger cameras and microphone capture, allowing buffered audio/video to accompany the emergency request.

Intelligent agency routing — The method identifies the relevant destination agency, including separate police and medical response paths.

Identity and authentication — Requester information is registered, identified and authenticated as part of the communication workflow.

Emergency data continuity — Information can be stored locally and later dispatched when connectivity becomes available.

Response-channel integration — The claimed workflow includes transmission of requester name, location and audio toward police walkie-talkie communication.

Session resilience — The architecture addresses call/connection interruption through automatic redial, repeated attempts and agency alerts.

Physical-damage escalation — The system contemplates a communication chain when an emergency device is physically broken or damaged.

6. Commercial Applications

Potential application environments include:

- Railways, railway stations, passenger coaches and mass transportation
- Automotive and connected vehicles
- Public safety and emergency-response infrastructure
- Smart-city and municipal infrastructure
- Telecommunications and communication networks
- Security, CCTV and surveillance systems
- Airports, aviation and ports
- Hospitals and healthcare facilities
- Industrial, manufacturing, mining and remote-operation sites
- Oil & gas and other critical infrastructure
- Educational campuses and institutional facilities
- Hotels, commercial buildings and residential communities
- Government, police and other authorized emergency agencies

The commercial opportunity can arise through direct system deployment, OEM integration, technology licensing, field-of-use licensing, per-site/per-endpoint arrangements or integration with existing emergency/CCTV/control-room infrastructure.

7. Potential Licensees / Strategic Partners

- Railway and metro infrastructure operators
- Automotive and connected-vehicle manufacturers
- Telecommunications operators and equipment companies
- CCTV/VMS and security-system manufacturers
- Emergency communication and public-safety system integrators
- Smart-city technology providers
- Government infrastructure agencies
- Airport, port and transportation technology providers
- Industrial safety and critical-infrastructure solution providers
- Large enterprise campus and facility-security providers

Licensing can be structured around territory, field of use, number of deployed endpoints/sites, OEM incorporation, system integration, or a combination of upfront consideration and running royalties.

8. Commercial Positioning

Recommended marketplace positioning:

“An integrated, resilient emergency communication architecture that coordinates emergency activation, multimedia capture, identity/authentication, network and protocol selection, agency routing, local data preservation, repeated connection attempts, satellite fallback and emergency-response communication.”

Avoid positioning the invention merely as a “panic button.” The technical and commercial proposition is the coordinated communication architecture surrounding the emergency event.

For non-technical decision makers, the value proposition is straightforward: the technology is designed to improve the chance that an emergency request reaches the right responder with more useful information, even when normal connectivity is weak, unavailable or interrupted.

9. Diligence & Licensing Note

The patent is granted in India. The grant record should be treated as the controlling source for the Indian patent status and current claim set. Earlier prosecution documents contain historical claim versions and should not be used as a substitute for the claims as granted.

For a commercial transaction, a prospective licensee should be provided with the official patent certificate, certified claims and—where appropriate—supporting specification/prosecution material under controlled diligence.

This dossier is a commercialization document. It does not itself constitute a legal infringement opinion, validity opinion, valuation report or damages calculation.

10. Selected Source Documents

The dossier is based on the Indian patent materials supplied for Patent Application 599/MUM/2013, including the patent grant record, amended/final claim documents, complete specification and prosecution/hearing materials.

The grant record records Patent No. 524607 and 20 claims dated 13 March 2024. ■filecite■turn12file14■

The amended method claim contains the network detection, protocol identification, authentication, agency routing, local storage, repeated connection attempts and satellite fallback features. ■filecite■turn12file17■L4-L34■

The later portions of the method claim include medical routing, recorded messages, controlled disconnection, automatic redial/drop handling and physical-damage escalation. ■filecite■turn12file17■L38-L62■

The system claim material identifies the hardware and processing architecture, including cameras, microphone, eMMC, processors, satellite transceiver, sensors and central processing functions. ■filecite■turn13file7■

Prepared for patent commercialization / licensing marketplace presentation