

(54) Title of the invention : SENSOR-BASED GESTURE DETECTION SYSTEM FOR UNDERWATER DIVERS

<div>(51) International classification :G06F0003010000, H04B0013020000, G06F0003048830, G06F0003030000, G06F0003023000</div> <div>(86) International Application No :NA Filing Date :NA</div> <div>(87) International Publication No : NA</div> <div>(61) Patent of Addition to Application Number :NA Filing Date :NA</div> <div>(62) Divisional to Application Number :NA Filing Date :NA</div>	<div>(71)Name of Applicant : 1)Chitkara University Address of Applicant :Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala ----- 2)Chitkara Innovation Incubator Foundation Name of Applicant : NA Address of Applicant : NA</div> <div>(72)Name of Inventor : 1)BAWA, Puneet Address of Applicant :Chitkara University Research and Innovation Network, Chitkara University Institute of Engineering & Technology, Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala ----- 2)MANISHA Address of Applicant :Department of Computer Science and Engineering, Chitkara University Institute of Engineering & Technology, Chitkara University, Chandigarh - Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala ----- 3)KADYAN, Virender Address of Applicant :School of Computer Science, University of Petroleum and Energy Studies, Dehradun - 248007, Uttarakhand, India. Dehradun -----</div>
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(57) Abstract :
The underwater communication system (!00) of the present disclosure offers a seamless means for divers to transmit Morse code signals using a single hand, enhancing communication efficiency in challenging underwater environments. Equipped with sensors embedded in a glove, the system (100) captures subtle hand gestures, such as tapping patterns and finger movements, which are translated into Morse code characters in real-time. These characters are then transmitted to a second user through a transmitter, enabling prompt and reliable communication. With features like dynamic gesture recognition and real-time feedback, the system (100) ensures intuitive operation and enhances safety and coordination during underwater missions. Its versatile design and intuitive interface empower divers to communicate effectively, even while engaged in tasks or handling equipment, thereby optimizing operational efficiency and facilitating seamless collaboration underwater.

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