

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202411004465 A

(19) INDIA

(22) Date of filing of Application :23/01/2024

(43) Publication Date : 02/02/2024

(54) Title of the invention : VIRTUAL REALITY-BASED SIMULATION AND ASSESSMENT SYSTEM FOR HYDRO-METEOROLOGICAL FLOOD MODELLING AND VISUALIZATION

(51) International classification :G06F0030200000, G06F0003010000, G16H0050500000, H04L0009400000, H02J0003000000

(86) International Application No :NA
 Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
 Filing Date :NA

(62) Divisional to Application Number :NA
 Filing Date :NA

(71)Name of Applicant :
1)Chitkara University
 Address of Applicant :Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India Rajpura -----

2)Chitkara Innovation Incubator Foundation
Name of Applicant : NA
Address of Applicant : NA

(72)Name of Inventor :
1)Manisha
 Address of Applicant :Research Scholar, Department of Computer Science and Engineering, Chitkara University Institute of Engineering & Technology, Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India Rajpura -----

2)Puneet
 Address of Applicant :Research Scholar, Chitkara University Research and Innovation Network, Chitkara University Institute of Engineering & Technology, Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India Rajpura -----

3)Dr. Archana Mantri
 Address of Applicant :Professor, Department of Electronics and Communication Engineering, Chitkara University Institute of Engineering & Technology, Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India Rajpura -----

(57) Abstract :
 ABSTRACT Virtual Reality-Based Simulation And Assessment System For Hydro-Meteorological Flood Modelling And Visualization The present disclosure introduces a virtual reality-based simulation and assessment system for hydro-meteorological flood modelling and visualization 100. It comprises of hydrological data source component 102, weather and climate data component 104, weather modelling unit 106, data pre-processing unit 108, data processing and prediction unit 110, hydrological simulation unit 112, Flood modelling unit 114, flood simulation and visualization unit 116, virtual reality rendering unit 118, virtual reality report visualization unit 120, user interface 122. It integrates advanced measuring devices, dynamic weather modelling, and immersive virtual reality technology to provide a real-time, interactive, and accurate platform for predicting, simulating, and visualizing complex flood scenarios. Reference Fig 1

No. of Pages : 26 No. of Claims : 10