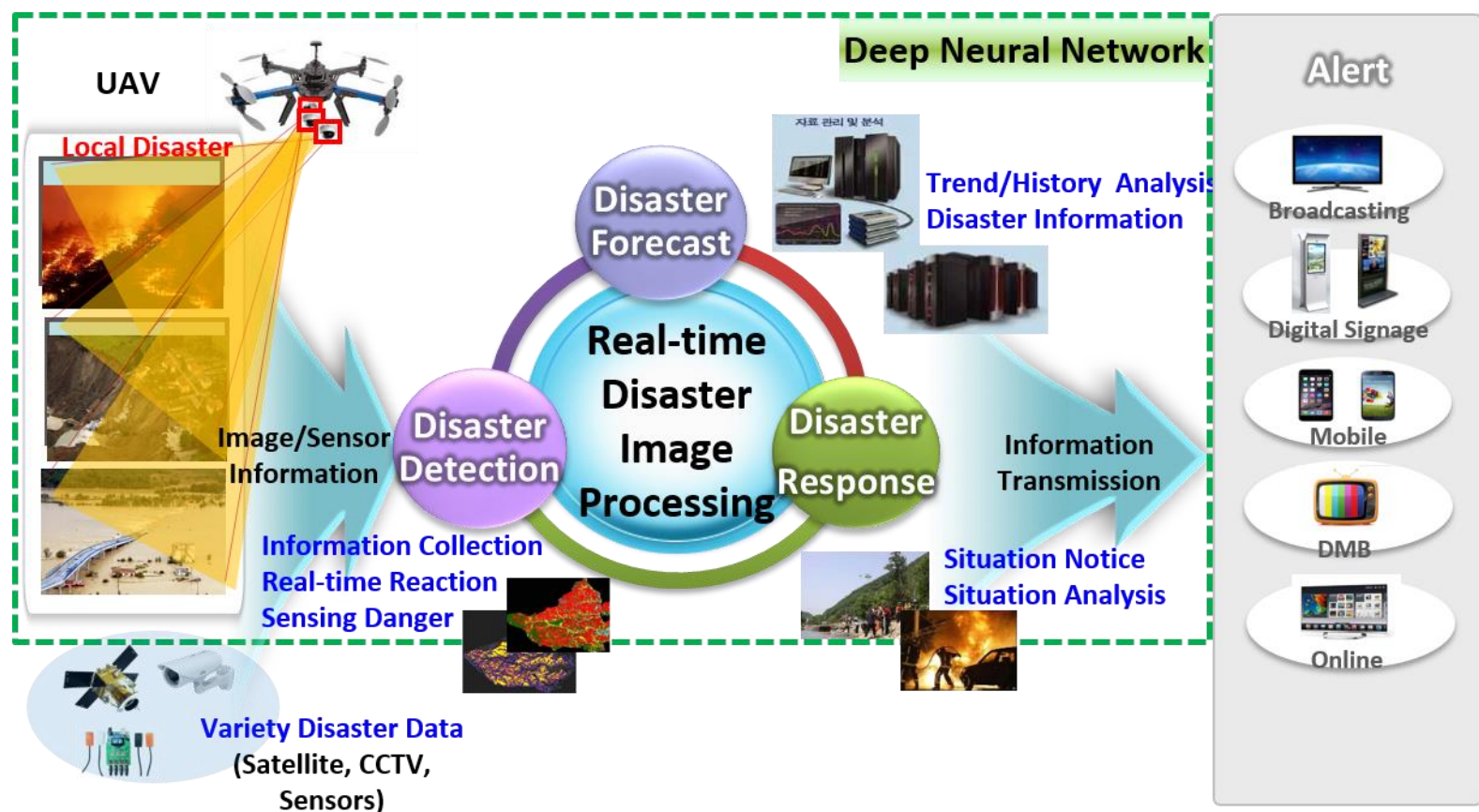


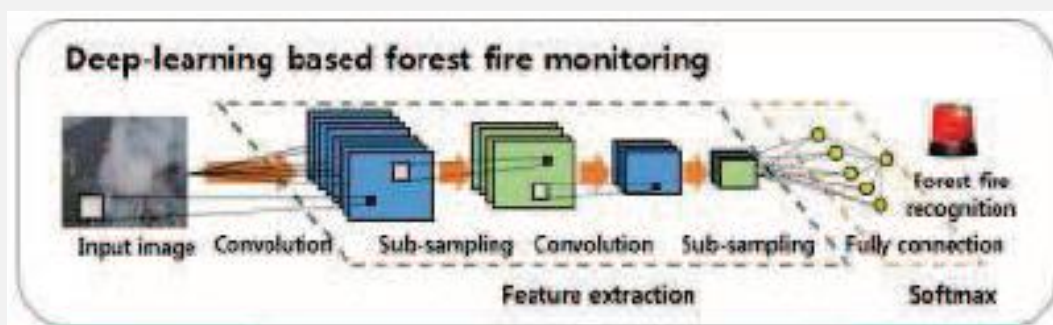
For Unmanned Aerial Vehicle

Deep Neural Networks for Forest Fire Detection



Technology Summary

- The technology is developed for disaster recognition and response by utilizing an UAV (Unmanned Aerial Vehicle) and an image analysis server.
 - Deep convolutional neural networks(CNNs) were selected as a fire detection method for the image analysis system.
 - The system is comprised of UAV control system, image analysis system, disaster forecasting system, Web-based visualization system, alert system, and disaster response scenario database.
 - The procedure including the image capturing, transferring and analyzing is performed in real time in order to provide immediate recognition result to a decision support system for disaster management.
- The system can be extended to support other kinds of disasters like flood and earthquake.



Features

- High accuracy by deep learning analysis
- High speed big data processing by GPU
- Applicable to video image
- Receiving color image, data processing and transmitting to the network

Development (TRL : 5)

Potential Applications

- Forest Fire Surveillance System
- Water Detection System

Inventor

Wonjae Lee
Smart Media Research Group
Broadcasting·Media Research Laboratory

Licensing Contact

Su-Jin Youn
Technology Commercialization Division
Tel : +82-42-860-5092
Email: sjy@etri.re.kr