Dronected

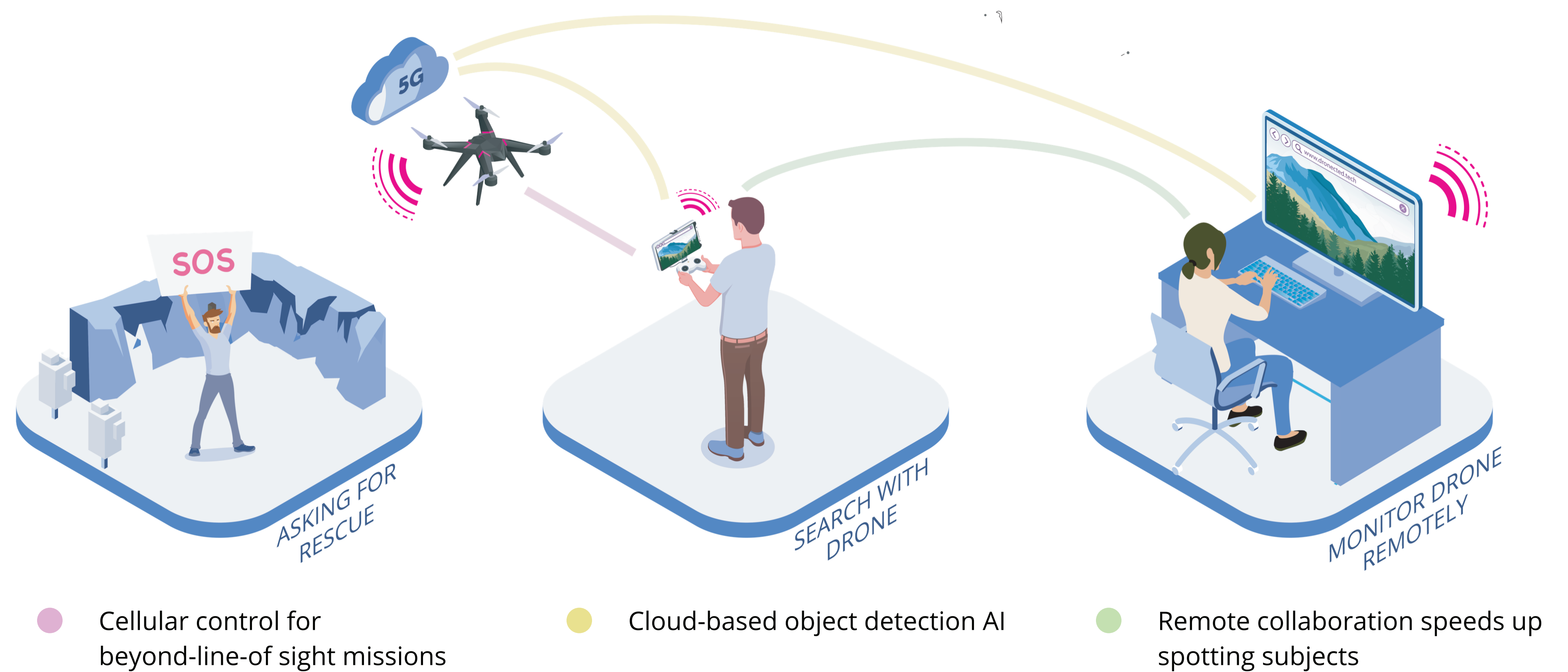*5G connected drones give search and rescue pilots powerful new tools to save lives*

Problem

Drones are an increasingly vital tool for search and rescue(SAR) operations, but they still have serious limitations. Pilots must split their concentration between flying the drone and scanning the video feed on small screens, or they must physically transfer higher quality video to a computer to take a closer look, wasting precious hours when lives are on the line.
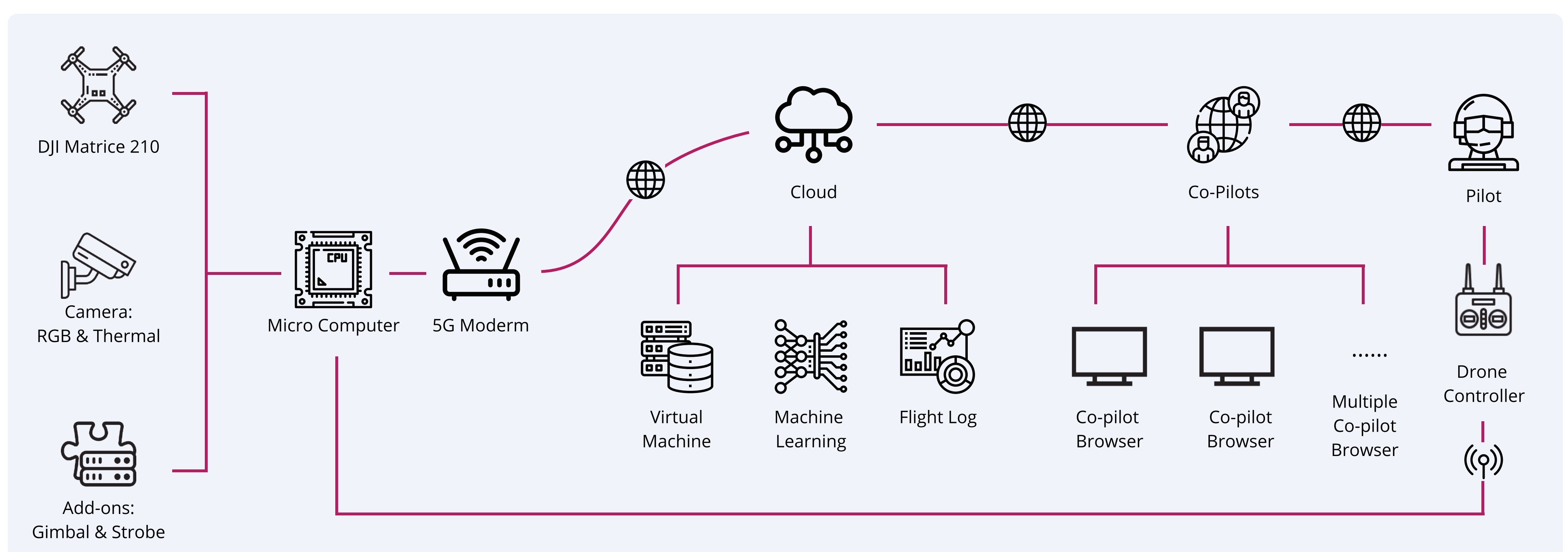
Solution

Connecting drones to the 5G cellular network opens up a world of possibilities. High-bandwidth data feeds allow a new cooperative workflow where the pilot can focus on flying and search and rescue experts can assist in navigation and spotting from anywhere in the world. Cloud computing allows powerfull AI assistance without expensive hardware. Advanced drone capabilities are freed from proprietary sysetms and can be added to any drone. 5G gives search and rescue personel the tools to save more lives.

User Scenario

ASKING FOR RESCUE — SEARCH WITH DRONE — MONITOR DRONE REMOTELY

- Cellular control for beyond-line-of sight missions
- Cloud-based object detection AI
- Remote collaboration speeds up spotting subjects

Solution Diagram

DJI Matrice 210 — Camera: RGB & Thermal — Add-ons: Gimbal & Strobe — Micro Computer — 5G Moderm — Cloud — Virtual Machine — Machine Learning — Flight Log — Co-Pilots — Co-pilot Browser — Co-pilot Browser — Multiple Co-pilot Browser — Pilot — Drone Controller

Process

Scope Problem → Primary Research → Ideation → [Prototype → Evaluation] 2 → Evaluation

- Scope Problem: Secondary Research, Stakeholder Analysis
- Primary Research: 11 Interviews with SAR Team Members
- Ideation: Technology Exploration, Feature Prioritization
- Prototype: Software Development, Hardware Development
- Evaluation: 13 Users Testings
- Evaluation: Functional Evaluation

GLOBAL INNOVATION EXCHANGE X · T·Mobile

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