Incident Aide System (IAS)

bringing technology to first responders

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Problem

Existing solution limitations:
• Push-to-Talk is the only means of communication
• Parallel communication not possible, inter-call latency
• Bad call quality in noisy environment
• Tracking acknowledgements is extremely difficult
• Limited timeliness and accuracy of information impacts decision-making

IAS Solution

• 911 call initiates event
• Commander creates incident and assigns responders in IAS, and shares Common Operating Picture (COP) (including e.g. street view) with engine team
• Commander issues alerts and COP awareness to the team, responders are able to send a Mayday distress alert to commander, and need to acknowledge periodic alerts
• IAS supports incident management with;
  • Real time Alerts/COP incident management
  • Time tagged log capture of all communication
  • Post incident report generation
• (Future work is to include 3rd party system integration)

System Architecture

• Cloud hosted secure solution
• Back-end Node.js IAS server with Mongo HQ storage
• Front-end Android IAS client app
• Front-end Web client interface
• Messaging via SMS, and JSON over http

IAS Scenario

AMBI is the first engine to the site of the incident. Engine chief John creates a new incident and other members become part of this incident in IAS

AMB 1 Members:
John
Joe
Jane
Jack

Commander:
John can transfer incident command to arriving Battalion Chief; for a small fire where no more engines are required, John remains as commander.

John can now send important alerts to the team and receive acknowledgements or Maydays from the team without delays or interference.

Responders:

Joe
Jane
Jack

All team members will then see the alerts on their mobile devices and can acknowledge it using the physical buttons present on the device.

Commander:
John can easily track acknowledgements of each member of his team.

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