What is a CAD?

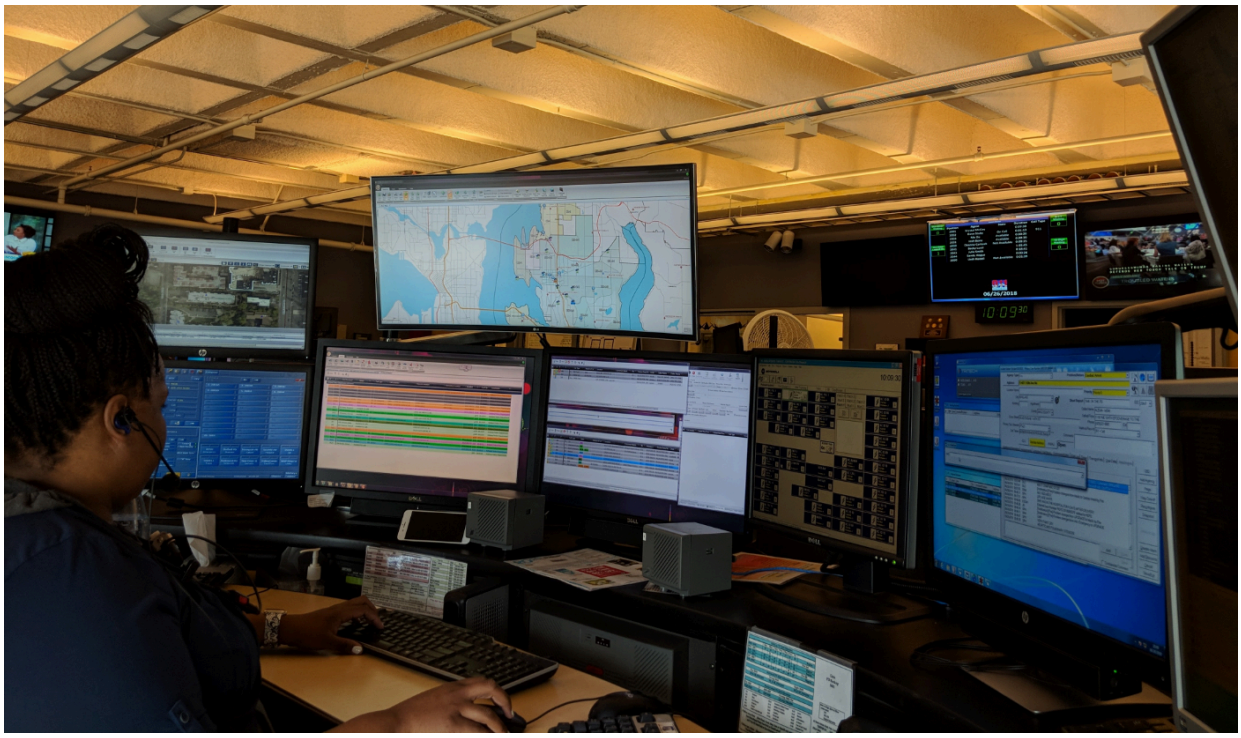
Computer Aided Dispatch. CAD is a collection of software used by agencies to manage resources in the field to respond to calls for service (CFS).

At its core, **CAD is the command and control module** for the fleet of Responders to calls for service. It allows Dispatchers to manage which Responders to send to what events, link those events to other events (whether those be other CFS, Incident Reports, Citations, Arrests, Fire Investigations, etc.), and share relevant information with Responders in the field. It also allows Responders to manage their own workloads and gather intelligence from the system while in the field.

CAD generally integrates with a Record Management System (RMS) – either Fire, Police, EMS, or some combination thereof – allowing CAD users to pull information from the RMS and push CFS information into the appropriate RMS (e.g. pushing a CFS and its associated Incident Report numbers and information into the RMS at the conclusion of a CFS).

In the public safety ecosystem, CAD is the origin of nearly all events. Almost any piece of data relevant to a public safety organization starts as part of, or is routed through, a CAD event.

This image may help contextualize:



User Roles

- **Call Takers**: These users answer calls for service from the agency's customers. In the case of public safety dispatch, the customers are citizens calling either 911 or the communications center directly.
    - These users are responsible for determining the type of incident occurring, capturing the information from the reporting party/parties (RP), and managing the RP and their response to the incident.
    - Information provided by the RP and the Call Taker's response should be able to be recorded in the CFS narrative/comments.

    - The Call Taker can send specific tasks and requests to Dispatchers based on the information acquired from the RP
    - In the case of Emergency Medical Calls, the system may use an Emergency Medical Dispatch system (third party or built-in) that prompts the dispatcher with appropriate questions and courses of actions based on the RP's responses to those questions.
    - The Call Takers interact with the system via a call-entry screen on their workstation in the Communications Center.
        - Call Taker screens often include both point-and-click as well as command-line interfaces for rapid entry/modification of CFS data
- **Dispatchers**: These users manage the agency's response to the CFS entered by the Call-Taker. The dispatcher determines the appropriate number and types of apparatus and personnel to respond to the call based on agency policy. The system may or may not be configured to make a suggestion for a minimum response, but the dispatcher has ultimate authority over what the actual response is.
    - The dispatcher manages dispatching units to the CFS and tracking the current statuses and locations of responding units as they go en-route, arrive at-scene, and eventually close the CFS with the appropriate disposition.
    - The dispatcher should record all of this information in the CFS narrative/comments.
    - The dispatcher may run internal CAD, RMS, or Department of Justice/CJIS searches for responding units in the field.
        - These search results may be attached to the CFS for future reference (e.g. attaching an expired auto registration response to a towed vehicle CFS).
    - The Dispatcher may "pull reports" for Responders – associating a new Incident Report or other kind of report (citation, field interview, arrest, fire run, etc.)
    - The Dispatchers interact with the system via a call-entry/management screen on their workstation in the Communications Center.
        - Dispatcher screens often include both point-and-click as well as command-line interfaces for rapid entry/modification of CFS data
- **Utility:** These users manage neither radio nor phones, but perform administrative tasks for Dispatchers and Call Takers. They are tasked with entering information into various systems (e.g. stolen vehicles or missing persons into the appropriate systems) as well as sometimes running wants/warrant checks and other CJIS history to be routed to appropriate dispatchers/call-takers/responders. The Utility position may not exist in every Communications Center, this is dependent on center size and availability of personnel. The Dispatcher will perform these tasks in centers without this position.
    - Utility roles can run CJIS checks on names, vehicles, warrants, etc.
    - Utility roles can enter CJIS data into the appropriate systems (e.g. missing persons into MUPS)
    - Utility role can re-route CFS data to external agencies (e.g. routing a medical CFS from the police system to the fire department's dispatch).
- **Responders**: These users are the police, fire, EMS, or other users (e.g. volunteers) in the field that are sent to respond to a CFS.
    - Responders can update their own statuses via their mobile data computers (MDC), setting themselves as en-route or arrived at-scene to a CFS without using the radio. This change in status is reflected on all terminals (in-cars and in the Communications Center) in real-time.
    - Responders can set their available/unavailable status so that they can be available or unavailable for dispatch (e.g. an officer can set themselves as AT COURT, meaning they are not available for dispatch to CFS)
    - Responders can set their status for statistical/tracking purposes (e.g. an officer can set their status to "Report Writing" while remaining available for dispatch to track their time without altering their availability)

    - Responders can self-initiate a CFS (e.g. an officer executing a traffic stop)
        - Doing this creates a new CFS, setting the Responder as the RP and original Dispatcher, and sets the Created, Dispatched, En-Route, and At-Scene times to all be the same
    - Responders interact with the system via a combination of the emergency radio and software running on their MDCs (Mobile Data Computers) in their units.
- **Citizens**: These are not often users of the system, but the initiators of events. However, some systems support the ability for a citizen to self-generate a scheduled CFS (e.g. schedule a vacation check while they are out of town).

Typical Scenario

At 10:42:31 on November 30, 2017, Steve Victim calls 911.

Sheila Calltaker answers the phone and takes Steve's information and what he is calling to report, determining the appropriate kind of CFS. Steve is saying that he came to find his car had been broken into and someone had stolen his laptop while he was paying for gas at a gas station at 214 Fifth Street.

Sheila creates a CFS of a 459-JO (burglary, just occurred), enters Steve's description of the laptop, his car, and any information he had that might be of value to the CFS, and sets the location to 214 Fifth Street. The initial creation of the CFS is completed at 10:43:19. Sheila also makes an inquiry to the state DMV and stolen car registry to pull information about Steve's car and attaches any responses that come back to the CFS. While she does this, she advises Steve to remain where he is and that an officer will be coming to his location as soon as they can.

Pat Dispatcher is alerted that a new CFS has been created and needs a single-unit response at 214 Fifth Street. The call type is a 459-JO, and Pat can see that this is a vehicle burglary and the vehicle in question is in good standing with the DMV and the owner has no wants or warrants. The CAD system recommends that unit 54 be dispatched to the call, so Pat issues the dispatch command at 10:46:22.

Mary Officer is driving unit 54 and her MDC notifies her that she has been dispatched to a CFS at 214 Fifth Street. She acknowledges the dispatch, checks the CFS notes and the CAD location history for 214 Fifth Street, seeing that this location has had numerous vehicle burglaries over the past 3 weeks. She then sets her status as En-Route at 10:46:53 and makes her way to the location.

When Mary Officer arrives at 10:51:33, she sets her status as Arrived/At-Scene on her MDC, and then talks with Steve Victim to take the report. She determines that there is sufficient evidence of a crime and the victim wishes to file a police report. Upon returning to her vehicle, on her MDC she requests an Incident Report be associated with this CFS. She provides Steve Victim with the reference number for this Incident Report, gives him any instructions that she deems necessary, and returns to her vehicle again.

She then "closes" (concludes) the CFS at 11:09:15, issuing a department-configured disposition code of "REPORT TAKEN."

Epilog

Mary Officer logs into the Field Reporting module of the RMS and finds that the Incident Report from the CFS she responded to for Steve Victim is in her queue to be written, with information from the CFS already populated into the report.

Scenario Results

In the scenario above, a CFS would have been created with a "Received" timestamp of 11/30/2017 10:42:31 and a "Created"

timestamp of 11/30/2017 10:43:19. The Call Taker is recorded as Sheila Calltaker, the Reporting Party (RP) is Steve Victim.

As soon as Pat Dispatcher issues the dispatch command for unit 54, the “Dispatch” timestamp of 11/30/2017 10:46:22 is recorded.

As soon as Mary Officer sets her status to En-Route, the “En-Route” timestamp is recorded as 11/30/2017 10:46:53. The same occurs for the “At-Scene” timestamp (11/30/2017 10:51:33) when she sets her status as Arrived/At-Scene.

When Mary Officer concludes the call, the “Closed” or “Concluded” timestamp is recorded as 11/30/2017 11:09:15 with a disposition of Report Taken and a related Incident Report of IR-17-1234.

The timestamps are recorded so that analysis can be done on the time between each stage of the response to the CFS. Whether that be the time from call received to call created, call received to unit dispatched, or time the unit was dispatched to the time the unit arrived At-Scene.

All notes and actions taken on the call are recorded with a timestamp and the user id of the user who made the change or addition.