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| **Use Case Name** | Communicate with Other Coordinator | |
| **Brief Description** | To resolve a crisis situation as quickly and cost-effectively as possible in cooperation with other coordinators. Coordination is required  as PoliceOfficer may enable Frreman to reach the crisls location faster. This can be done by for example escorting the fire trucks or by  creating roadblocks. | |
| **Precondition** | PoliceStationCoordinator and FlreStationCoordinator are aware of the crisis. PoliceStationCoordlnator and FireStalionCoordinator have  not established communication. | |
| **Primary Actor** | PoliceStationCoordinator | |
| **Secondary Actors** | FireStationCoordinator | |
| **Dependency** | None | |
| **Generalization** | None | |
| **Basic Flow** | **Steps** | |
| **1** | PoliceStationCoordlnator communicates with FireStationCoordinator to establish communlcatlon. |
| **2** | PoliceStationCoordlnator exchanges crlsis details with FireStaUonCoordlnator. |
| **3** | PoliceStationCoordinator communicates with FireStationCoordinator to define the number of fire trucks and police vehicles to  deploy. |
| IF the negotlatlon duratlon ts wlthin a predefined llmit THEN | |
| DO | |
| **4** | PoliceStationCoordinator proposes one reute for a flre truck and one reute for a police vehicle to reach crisis location. |
| UNTIL All the fire trucks and police vehicles have routes defined. | |
| IF FireStationCoordinator agrees to the routes proposed by PoliceStationCoordlnator THEN | |
| **5** | PohceStationCoordinator communicates with FireStationCoordinator about dispatched vehicles according to the reute plan. |
| ENDIF | |
| ENDIF | |
| DO | |
| **6** | PoliceStationCoordinator communicates with FireStationCoordinator to know the arrivals of a police vehicle and fire truck at a  targeted location. |
| IF the police vehicle or the fire truck has arrived the targeted locatJon THEN | |
| **7** | PoliceStationCoordinator communicates with FireStationCoordinator to know the completion of the objective of the police  vehicle or fire truck. |
| ENDIF | |
| UNTIL All the fire trucks and police vehicles are proceed. | |
| **8** | PoliceStationCoordinator and FireStationCoordinator agree to close the crisis. |
| **Postcondition** | The crlsls has been closed. |
| **Specific Alternative Flow** | **RFS Basic Flow 4** | |
| ELSE | |
| **1** | The system records a Timeout. |
| **2** | The system alterts PoliceStationCoordinator and FireStationCoordinator abeut the ti"neout. |
| RESUME 5 | |
| ENDIF | |
| ABORT | |
| **Postcondition** | A timeout ls recorded In the system. |
| **Specific Alternative Flow** | **RFS Basic Flow 14** | |
| ELSEIF a police vehide or fire truck breaks down on the way tc the destlnation THEN | |
| **1** | PollceStatlonCoordlnator er FireStationCOOfldlnator lnforms each other of the new ETA of the po1ice vehlcle or the fire truck  MEANWHILE PoliceStationCoordinator and F1reStat1onCoordinator assign a reute to the replacement police vehicle or fire truck  and dispatch lt. |
| RESUME 13 | |
| ENDIF | |
| ABORT | |
| **Postcondition** | The status of the location of the police vehicle or fire truck is updated. A new police vehicle or fire truck is dispatched. |
| **Specific Alternative Flow** | **RFS Basic Flow 8** | |
| ELSE | |
| **1** | PoliceStatJonCoordinator removes the disagreed routes from the proposed routes. |
| **2** | PoliceStationCoordinator VALIDATES THAT there are routes available to be proposed. |
| RESUME 6 | |
| ENDIF | |
| ABORT | |
| **Postcondition** | A list cf agreed routes is updated. |
| **Global Alternative Flow** | Communication is not available. | |
| **1** | PoliceStationCoordinator and FireStationCoordinator continue to address the crisis individualty. |
| **2** | ABORT |
| **Postcondition** | No communication is going on between PoliceSiationCoordinator and FireStationCoordinator. |
| **Global Alternative Flow** | Communication has been restored after a period of unavailable communlcation. | |
| IF the crisis has been resolved THEN | |
| RESUME 18 | |
| ENDIF | |
| IF the communication between PoliceStationCoordinator and FireStationCoordinator has not vet been established THEN | |
| RESUME 1 | |
| ENDIF | |
| IF the route agreement has been reached THEN | |
| **1** | PoliceStationCoordinator and FireStationCoordinator exchange information on routes established for police vehides and fire  trucks, locations of police vehicles and fire trucks, and the status of the crisis. |
| DO | |
| IF a police vehicle or fire truck has been dispatched but not arrived THEN | |
| RESUME 9 | |
| ENDIF | |
| IF a police vehicle or fire truck has arrived at the targeted location THEN | |
| RESUME 13 | |
| ENDIF | |
| IF a police vehicle or fire truck has completed its objective THEN | |
| RESUME 15 | |
| ENDIF | |
| UNTIL the status of all the police vehicles and fire trucks are updated. | |
| ENDIF | |
| ABORT | |
| **Postcondition** | The status of the crisis is updated. The status of all the police vetudes and fire trucks dispatched is updated. |