

Intelligent Transportation Systems

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CTMS/CTIS

UC CTMS 6.00 - View Alarms

Version 1.0

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Revision History

Date	Version	Description	Author
April 29, 2004	1.0	Initial Version	Raj Chaudhuri
July 26, 2004	1.0	Added Flows. Added Special Requirements	Raj Chaudhuri
January 17, 2005	1.0	Added Note at top of flows that this UC will not be used for first release.	Nancie Fay

CTMS/CTIS	Version: 1.0
UC CTMS 6.00 - View Alarms	Date: April 19, 2005

Table of Contents

1.	Use Case	1
1.1	Abstract	1
1.2	Actor(s)	1
2.	Flow of Events	1
2.1	Basic Flow	1
2.2	Alternate Flow	2
3.	Special Requirements	3
4.	Assumptions	3
5.	Pre-Conditions	3
6.	Post-Conditions	3
7.	Extension Points	3
8.	Issues / Constraints / Questions	3
9.	Data Elements	3

CTMS/CTIS	Version: 1.0
UC CTMS 6.00 - View Alarms	Date: April 19, 2005

UC CTMS 6.00 - View Alarms

1. Use Case – **NOTE: This UC will not be used for first release.**

1.1 Abstract

Unacknowledged alarms are loaded into the Alarms window at start up. When an alarm is acknowledged by a user, the status change is broadcast to all CTMS clients. New alarms are broadcast to this window as well

1.2 Actor(s)

Actor	Description
Administrator	The System Administrator for the Colorado Transportation Management Center (CTMC)
Maintenance	The Maintenance person on duty for the Colorado Transportation Management Center (CTMC)
Operator	The Operator on duty for the Colorado Transportation Management Center (CTMC)

2. Flow of Events

2.1 Basic Flow

1. The logged in user (Operator, Maintenance, or Administrator) clicks on View > Status Console
2. The system displays the status console. This includes the View Alarms window (refer to UC Navigate Desktop for other info). The View Alarms window contains the following elements: Last Updated Time, Alarm Type, Severity, Description, Device ID, Instruction ID, Generated By, Acknowledged, and Acknowledged By (see UC Add Alarm for list of types). The system provides links to sort each of the columns
3. The system provides buttons for the following: Acknowledge Alarm(s), Clear
4. The system lists all the unacknowledged alarms in this window (i.e. at login time when the client starts up). The elements displayed are listed in step 2. And the alarms are displayed in order of severity (highest first) followed by last updated time (last updated time descending order)
5. In the event a new alarm occurs, the system displays this information (elements listed in step 2). As additional alarms occur the system lists each one above the previous one, in order of Severity and then Last Updated Time (hence if we have a Sev 1 alarm, and a Sev 2 alarm occurs, it will be listed below the Sev 1 alarm)
6. The user selects one or more unacknowledged alarms and clicks on Acknowledge Alarm(s)
7. The system sets the alarm's Acknowledged attribute to true, the Acknowledged By to the logged in user's user id, and the Last Updated Time with the current time on the system
8. The system logs this event. It passes the following elements to UC Log User Activity: Task Name (Acknowledge Alarm), Time (current time), Owner (logged in user), ID (DMS Device ID), Device Type (DMS Device Type), Message Text (blank), Username (blank), Instruction ID (blank), Notes (Alarm ID and more (see UC Log User Activity for details))
9. The system updates this information in all the logged in clients. The system displays acknowledge alarms with a different row color (this is to clearly denote acknowledged versus unacknowledged alarms in the window)

CTMS/CTIS	Version: 1.0
UC CTMS 6.00 - View Alarms	Date: April 19, 2005

10. The user clicks on Clear
11. The system clears out all Acknowledged Alarms in the display (only unacknowledged alarms are displayed in reverse time order)

2.2 Alternate Flow

1. The logged in user (Operator, Maintenance, or Administrator) clicks on View > Status Console
2. The system displays the status console. This includes the View Alarms window (refer to UC Navigate Desktop for other info). The View Alarms window contains the following elements: Last Updated Time, Alarm Type, Severity, Description, Device ID, Instruction ID, Generated By, Acknowledged, and Acknowledged By (see UC Add Alarm for list of types). The system provides links to sort each of the columns
3. The system provides buttons for the following: Acknowledge Alarm(s), Clear
4. The system lists all the unacknowledged alarms in this window (i.e. at login time when the client starts up). The elements displayed are listed in step 2. And the alarms are displayed in order of severity (highest first) followed by last updated time (last updated time descending order)
5. In the event a new alarm occurs, the system displays this information (elements listed in step 2). As additional alarms occur the system lists each one above the previous one, in order of Severity and then Last Updated Time (hence if we have a Sev 1 alarm, and a Sev 2 alarm occurs, it will be listed below the Sev 1 alarm)
6. The user selects one or more unacknowledged alarms and clicks on Acknowledge Alarm(s)
 - 6.1. The user does not select an alarm and clicks on Acknowledge Alarm(s)
 - 6.2. The system informs the user that they must select at least 1 unacknowledged alarm before clicking the Acknowledge Alarm(s) button
 - 6.3. The system provides a button called 'OK'
 - 6.4. The user clicks on 'OK'
 - 6.5. Go to step 2
7. The system sets the alarm's Acknowledged attribute to true, the Acknowledged By to the logged in user's user id, and the Last Updated Time with the current time on the system
8. The system logs this event. It passes the following elements to UC Log User Activity: Task Name (Acknowledge Alarm), Time (current time), Owner (logged in user), ID (DMS Device ID), Device Type (DMS Device Type), Message Text (blank), Username (blank), Instruction ID (blank), Notes (Alarm ID and more (see UC Log User Activity for details))
 - 8.1. In the event there is an error generated when trying to acknowledge this alarm, the system logs this event with the additional information that the task failed
 - 8.1.1. In the event there is a timeout when trying to acknowledge this alarm, the system logs this event with the additional information that this task timed out
9. The system updates this information in all the logged in clients. The system displays acknowledge alarms with a different row color (this is to clearly denote acknowledged versus unacknowledged alarms in the window)
10. The user clicks on Clear
 - 10.1. The user minimizes this window
 - 10.2. The system continues to list new events as they occur
 - 10.3. The system informs the client that there are new alarms (for example by flashing the console window or displaying an icon in the system tray) (this will be determined during the implementation phase)
 - 10.4. The user opens the View Alarms window
 - 10.5. Go to step 2

CTMS/CTIS	Version: 1.0
UC CTMS 6.00 - View Alarms	Date: April 19, 2005

- 10.5.1. The user clicks on a sort link (for example Severity)
- 10.5.2. The system redisplay the existing information using the Severity column to sort by (see Special requirements for more)
- 10.5.3. Go to step 6
- 11. The system clears out all Acknowledged Alarms in the display (only unacknowledged alarms are displayed in reverse time order)

3. Special Requirements

- 1. The system prevents users from acknowledging previously acknowledged alarms. Only unacknowledged alarms can be acknowledged (once)
- 2. As new alarms come in, the system redisplay the Alarms window with Severity (highest first) followed by Last Updated Time (most recent first). It overrides any user selected sort order
- 3. The system differentiates between acknowledged versus unacknowledged alarms using a different row background color. The unacknowledged alarms need to be more prominent

4. Assumptions

5. Pre-Conditions

UC 2.00 – Navigate Desktop

6. Post-Conditions

An alarm can be acknowledged

7. Extension Points

8. Issues / Constraints / Questions

9. Data Elements

See UC Add Alarm

Name	Description	Validation	Example