

**Intelligent Transportation Systems**

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## CTMS/CTIS

### UC CTMS 6.10 - Add Alarm

Version 1.3

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CTMS/CTIS	Version: 1.3
UC CTMS 6.10 - Add Alarm	Date: April 19, 2005

## Revision History

Date	Version	Description	Author
April 29, 2004	1.0	Initial Version	Raj Chaudhuri
July 13, 2004	1.1	Added Flow. Added Pre-conditions and Post Conditions. Added Data Elements	Raj Chaudhuri
July 19, 2004	1.2	Added Reminder alarm type and corresponding pre-condition. Added 'flashing' functionality	Raj Chaudhuri
July 21, 2004	1.2	Added Basic Flow	Raj Chaudhuri
July 26, 2004	1.3	Per discussion with Rod and Cary, added Acknowledge Alarm attributes. Updated flows accordingly	Raj Chaudhuri
August 24, 2004	1.3	Fixed typos	Raj Chaudhuri
December 1, 2004	1.3	Added Alarm for Integrate with CoTrip	Raj Chaudhuri
January 17, 2005	1.3	Added Note at top of flows that this UC will not be used for first release.	Nancie Fay

CTMS/CTIS	Version: 1.3
UC CTMS 6.10 - Add Alarm	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	1
3.	Special Requirements	2
4.	Assumptions	2
5.	Pre-Conditions	2
6.	Post-Conditions	2
7.	Extension Points	2
8.	Issues / Constraints / Questions	2
9.	Data Elements	2

CTMS/CTIS	Version: 1.3
UC CTMS 6.10 - Add Alarm	Date: April 19, 2005

## UC CTMS 6.10 - Add Alarm

### 1. Use Case – **NOTE: this UC will not be used in release 1.**

#### 1.1 Abstract

When a task (such as Activate Message) fails an alarm is generated. This UC defines these steps. The system automatically creates and broadcasts a new alarm

#### 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. An error has occurred when a user has performed a task (see to pre-conditions for entire list of tasks that are capable of generating alarms and data elements for the alarm types list)
2. The system receives the following elements from the appropriate task (UC): Alarm Type (Task (see Data elements)), Alarm Description (For respective UC), Device ID (put Device ID here), Generated ID (user id of user performing task), Last Updated Time (current time)
3. The system inserts this data into the system's log table(s). The system sets the alarm to 'Unacknowledged'
4. The system broadcasts this information to all logged in clients
5. The client displays this new information (see UC View Alarms for details)

#### 2.2 Alternate Flow

1. An error has occurred when a user has performed a task (see to pre-conditions for entire list of tasks that are capable of generating alarms and data elements for the alarm types list)
2. The system receives the following elements from the appropriate task (UC): Alarm Type (Task (see Data elements)), Alarm Description (For respective UC), Device ID (put Device ID here), Generated ID (user id of user performing task), Last Updated Time (current time)
3. The system inserts this data into the system's log table(s). The system sets the alarm to 'Unacknowledged'
4. The system broadcasts this information to all logged in clients
5. The client displays this new information (see UC View Alarms for details)
  - 5.1. In the event a logged in client does not have the Alarms window open, the client still receives the data
  - 5.2. 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) (see UC View

CTMS/CTIS	Version: 1.3
UC CTMS 6.10 - Add Alarm	Date: April 19, 2005

Alarms for details)

- 5.3. The user opens the View Alarms window
- 5.4. The system displays all alarms information (all the alarms it has received since the client logged in to the system) (see UC View Alarms for details)

### 3. Special Requirements

### 4. Assumptions

### 5. Pre-Conditions

- UC CTMS 1.00 – Login to System
- UC CTMS 3.20 – Add Message to one or more DMSs (message)
- UC CTMS 3.20 – Add Message to one or more DMSs (message reminder)
- UC CTMS 3.30 – Adjust Brightness
- UC CTMS 3.40 – Clear DMS Message
- UC CTMS 3.50 – Poll DMSs
- UC CTMS 3.51 – Test DMS Pixels
- UC CTMS 5.10 – Add DMS
- UC CTMS 5.11 – Configure Communications Pool
- UC CTMS 5.12 – Configure Communications Port
- UC CTMS 5.20 – Read from Sign
- UC CTMS 5.30 – Configure DMS
- UC CTMS 5.40 – Remove DMS
- UC CTMS 7.00 – Generate Fax Log
- UC CTMS 7.10 – Generate Equipment Failure Report
- UC CTMS 8.10 – Log User Activity
- UC CTMS 9.00 – Integrate with Co-Trip

### 6. Post-Conditions

An alarm is generated and broadcast to all logged in clients

### 7. Extension Points

UC CTMS 6.00 – View Alarms

### 8. Issues / Constraints / Questions

Are there any other scenarios that can result in New Alarms (i.e. Poll DMS is successful, but the DMS status has an error)

### 9. Data Elements

Name	Description	Validation
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CTMS/CTIS	Version: 1.3
UC CTMS 6.10 - Add Alarm	Date: April 19, 2005

Name	Description	Validation
Alarm Type	<p>The types of alarms are:</p> <ul style="list-style-type: none"> <li>Login Error (Sev 1)</li> <li>Activate Message Error (Sev 1)</li> <li>Activate Message Timeout (Sev 1)</li> <li>Message Reminder (Sev 3)</li> <li>Adjust Brightness Error (Sev 1)</li> <li>Adjust Brightness Timeout (Sev 1)</li> <li>Clear Sign Error</li> <li>Clear Sign Timeout (Sev 1)</li> <li>Poll DMS Error (Sev 1)</li> <li>Poll DMS Timeout (Sev 1)</li> <li>Execute Pixel Test Error (Sev 1)</li> <li>Execute Pixel Test Timeout (Sev 1)</li> <li>Add Sign Error (Sev 1)</li> <li>Add Sign Timeout (Sev 1)</li> <li>Read from Sign Error (Sev 1)</li> <li>Read from Sign timed out (Sev 1)</li> <li>Configure DMS Error (Sev 1)</li> <li>Configure DMS Timeout (Sev 1)</li> <li>Remove Sign Error (Sev 1)</li> <li>Remove Sign Timeout (Sev 1)</li> <li>Log Event Error (Sev 1)</li> <li>Log Event Timeout (Sev 1)</li> <li>Add Communications Pool Error (Sev 1)</li> <li>Add Communications Pool Timeout (Sev 1)</li> <li>Delete Communications Pool Error (Sev 1)</li> <li>Delete Communications Pool Timeout (Sev 1)</li> <li>Modify Communications Pool Error (Sev 1)</li> <li>Modify Communications Pool Timeout (Sev 1)</li> <li>Add Communications Port Error (Sev 1)</li> <li>Add Communications Port Timeout (Sev 1)</li> <li>Modify Communications Port Error (Sev 1)</li> <li>Modify Communications Port Timeout (Sev 1)</li> <li>Generate Fax Log Error (Sev 1)</li> <li>Generate Fax Log Timeout (Sev 1)</li> <li>Generate Equipment Failure Report Error (Sev 1)</li> <li>Generate Equipment Failure Report Timeout (Sev 1)</li> <li>Integrate with Co-Trip Error (Sev 1)</li> <li>Integrate with Co-Trip Timeout (Sev 1)</li> </ul>	<p>Not null. Enumerated Type. Size=100</p> <p>No alarm tasks for the following:</p> <ul style="list-style-type: none"> <li>- Logout ← can this fail???</li> <li>- No alarm for edit/add user</li> <li>- Remove Instruction from Queue</li> </ul>
Severity	<p>Type of Severity for each alarm type</p> <p>The values include:</p> <ul style="list-style-type: none"> <li>Severity 1 (highest)</li> <li>Severity 2 (medium)</li> <li>Severity 3 (lowest)</li> </ul>	Not null. Enumerated Type. Size=100
Description	Refer to each UC for details	String. Size=1000
Last Updated Time	Current time on the system	Date Time. Not null
Device ID	Device ID of device	See UC Add Device
Generated ID	User ID of user generating alarm	Not null. See UC Add User
Acknowledged	Whether or not an alarm is acknowledged	Not null. Boolean

CTMS/CTIS	Version: 1.3
UC CTMS 6.10 - Add Alarm	Date: April 19, 2005

Name	Description	Validation
Acknowledged By	User ID of user who acknowledged the alarm	See UC Add User