

Intelligent Transportation Systems

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CTMS/CTIS

UC CTMS 7.00 - Generate Fax Log

Version 1.3

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CTMS/CTIS	Version: 1.3
UC CTMS 7.00 - Generate Fax Log	Date: April 19, 2005

Revision History

Date	Version	Description	Author
April 29, 2004	1.0	Initial Version	Raj Chaudhuri
August 30, 2004	1.0	Added Alt Flow, Special Requirements, and Data Elements	Raj Chaudhuri
September 15, 2004	1.1	Reworked flow. Report is always generated when requested. DMS message change is indicated	Raj Chaudhuri
September 20, 2004	1.2	Added Basic flow. Fixed typos. Added issues	Raj Chaudhuri
November 9, 2004	1.3	Add message for offline DMS	Raj Chaudhuri
January 17, 2005	1.3	Removed all references to alarms generated.	Nancie Fay

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1. Use Case

1.1 Abstract

A user is able to request the system to generate the Fax Log Reports. The system generates the reports and sends it to the fax server for broadcast

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 user clicks on Manage > Generate Fax Log
2. The system displays the following summary for all the reports: Report Name, Generate Report (check box). The following text is also displayed: "The system will generate the following Fax Log Reports: List Report here." All reports are selected by default. The system allows the user to manually change these selections. The system provides buttons for the following: Generate Reports, and Cancel.
3. The user clicks Generate Reports
4. For each selected report, the system will generate a report containing the following data elements: Report Name/Header (see wire-frame), Date/Time (current time on system), Generated By (currently logged in user). For each DMS in this report, the system lists the following elements: DMS Common Name, and Message. In the event the state of the DMS is 'Failed', it will display this status instead of the Message text (as the Message text may or may not be displayed on the sign). For DMS, the system must be able to indicate whether or not the message on the DMS has changed (new message or current message blanked) since the last time the report was published. It does so by checking the message creation time of a DMS and compares it with the last time this report was run. If this time is greater than the report run time, the DMS message is considered to have been modified and will be in bold (or somehow clearly indicated) in the report. Refer to Wire-frame section and Special Requirements for more
5. For each generated report, the system sends a message to the fax server with the report attached. Refer to Special Requirements for technical details
6. The system logs this event (for each report generated). It passes the following elements to UC Log User Activity: Task Name (Generate Fax Log Report), Time (current time), Owner (logged in user), ID (Fax Log Report ID), Device Type (blank), Message Text (blank), Username (blank), Instruction ID (blank), Notes (blank) (refer to UC Log User Activity for details)
7. The system displays a confirmation to the user. The following elements are displayed: Report Name, Status (Sent, Failure to Send etc.). The following text is also displayed: "Summary of Generate Fax Logs". The system presents an 'OK' button

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8. The user clicks the OK button
9. The system returns the user to the Navigate Desktop screen (see pre-condition)

2.2 Alternate Flow

1. The user clicks on Manage > Generate Fax Log
2. The system displays the following summary for all the reports: Report Name, Generate Report (check box). The following text is also displayed: “The system will generate the following Fax Log Reports: List Report here.” All reports are selected by default. The system allows the user to manually change these selections. The system provides buttons for the following: Generate Reports, and Cancel.
3. The user clicks Generate Reports
 - 3.1. The user deselects all Reports
 - 3.2. The system disables the Generate Reports button
 - 3.2.1. The user clicks Cancel
 - 3.2.2. Go to end
4. For each selected report, the system will generate a report containing the following data elements: Report Name/Header (see wire-frame), Date/Time (current time on system), Generated By (currently logged in user). For each DMS in this report, the system lists the following elements: DMS Common Name, and Message. In the event the state of the DMS is ‘Failed’, it will display this status instead of the Message text (as the Message text may or may not be displayed on the sign). For DMS, the system must be able to indicate whether or not the message on the DMS has changed (new message or current message blanked) since the last time the report was published. It does so by checking the message creation time of a DMS and compares it with the last time this report was run. If this time is greater than the report run time, the DMS message is considered to have been modified and will be in bold (or somehow clearly indicated) in the report. Refer to Wire-frame section and Special Requirements for more
5. For each generated report, the system sends a message to the fax server with the report attached. Refer to Special Requirements for technical details
6. The system logs this event (for each report generated). It passes the following elements to UC Log User Activity: Task Name (Generate Fax Log Report), Time (current time), Owner (logged in user), ID (Fax Log Report ID), Device Type (blank), Message Text (blank), Username (blank), Instruction ID (blank), Notes (blank) (refer to UC Log User Activity for details)
 - 6.1. In the event there is an error generating a Fax Log Report, the system logs this event with the additional data that this task was not successful.
 - 6.2. The system sets the status of this particular Report to Failed.
 - 6.2.1. In the event there is a timeout generating a Fax Log Report, the system logs this event with the additional data that this task was not successful (and that it timed out).
 - 6.2.2. The systems sets the status of this particular Report to Failed.
7. The system displays a confirmation to the user. The following elements are displayed: Report Name, Status (Sent, Failure to Send etc.). The following text is also displayed: “Summary of Generate Fax Logs”. The system presents an ‘OK’ button
8. The user clicks the OK button
9. The system returns the user to the Navigate Desktop screen (see pre-condition)

3. Special Requirements

1. Each Report is generated and sent via an SMTP message to the Fax Server, with the report attached as an HTML file (this technical design approach will be validated and confirmed when this UC is implemented)

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4. Assumptions

1. Fax recipients and groups are setup outside the scope of this application. All pertinent details are configured and setup prior to using this UC
2. The Fax Reports itself are pre-defined and created (lets say using a template) into the system before they can be used (in the application). Changes to the Fax Report (layout, format, elements) will require a code change. No GUI is provided to perform the Report design/creation task

5. Pre-Conditions

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6. Post-Conditions

Fax Log Reports are generated and sent to the Fax server

7. Extension Points

8. Issues / Constraints / Questions

1. Does CTMS app need to send a message for each recipient in the fax log for a given report (i.e. if 5, send 5?), or will that be configured as a group in the Fax Server, and CMTS sends one message for a given report?
2. Can a DMS belong to more than 1 report?
3. Who can generate the Fax Logs?
4. Message Creation time field is currently not in Add Message UC
5. Does the Fax Server report back for each telephone number that it attempts to call on a report being sent?

9. Data Elements

Name	Description	Validation	Example
Report ID	PK for each pre-defined report	Not Null. Unique. Integer. Size=10	
Report Name	Business name for each pre-defined report Currently, there are only 2 Reports (or groups): I-25 VMS I-70 VMS	Not null. Unique. String. Size=255	
DMS Device IDs (separate table)	Related table that lists all the DMSs that belong to this report Can a DMS can belong to more than 1 report (if so we will need to add a last modified time in this related DMS table and compare last modified time against it)	FK to DMS Device ID	

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Sign Status	0=OK, 1=Service, 2=Failed, 3=New, 4=Offline Enumerated Type Displays the 'Failed' status if that's what the DMS is currently	Enumerated type. Not null Size=130	
Message Multi String Text	(Message Multi String) The message text in multi-string format. Contains all the tags and the text of the message. This includes the font, page time on/off etc. Example: [pt20o10]CDOT TEST [np]TESTING [nl][pt20o10]CDOT TEST page time on/off etc Note: The Message is displayed in text (HTML) and not MULTI-format. Hence, the following tags need to be converted to HTML elements (nl→br, np→br, justification to left, center or right)	See Add Message UC	
Fax Log Send Status	When a report is run, the status indicates the outcome of the report The values include: Successful Failed (do we need more granular report statuses?)	Enumerated type	
Report Run time	The current date/time on the system when a particular report was run	Date/Time	

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Report Recipient	The recipient of the report (as needed by the Fax Sever software) Need to determine if we need individual TNs here? May be a separate table as well	Not null. String ???	
Fax Server	Email address of the fax server. Where the report gets sent to	Not null. String. Size=100	

10. Wire-frame

COLORADO TRANSPORTATION MANAGEMENT CENTER

ADVANCED TRAVELER INFORMATION UNIT

VARIABLE MESSAGE SIGNS – REGIONS 1, 2, 5 AND 6

PHONE: 303 512 5830

FAX: 303 274 9394

DATE/TIME: September 15, 2004 4:21 PM

Generated By: Joe Tucker

119-S-41 Boulder Canyon	BLANK
285-S-248 Turkey Creek Canyon	BLANK
40-E-234 Mary Jane	ROAD MAY BE ICY IN AREAS WATCH FOR ROCKS ON ROAD
40-E-256 Highway 40/Empire	WATCH FOR ROCKS ON THE ROAD
40-W-256 Highway 40/Empire	WATCH FOR ROCKS ON THE ROAD
470-E-23 Holly Street	BLANK
... (see table for all DMS in report)	