Dynamic Response to Urgent Maintenance Request System (DRUMRS)
Design Document

Author:
    Kah Hin Lai
    Ross Faber
    Chun F Chak
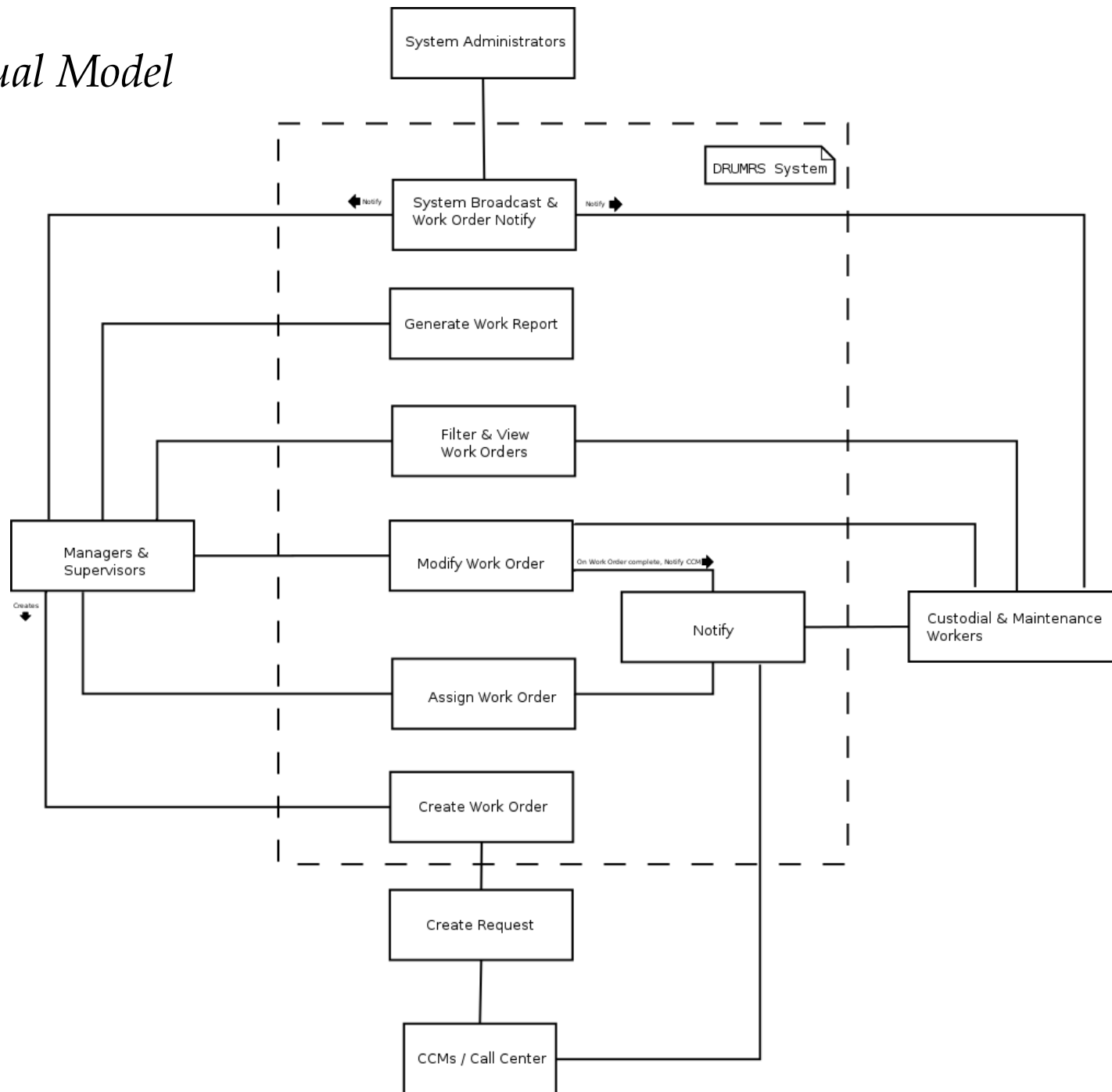   Amiel Hassan

Group: 12

Contents

Requirement number	Use Case	Introduction	Rationale	Source	Author	Required Function	Related Requirements	Support Material	Test Cases	Date Added	Date Modified	Priority
1.1	Request Service	Emergency Request	Communicate emergency requests for safety reasons	Ross Faber	Ross Faber	The DRUMRS system will communicate using a notification that there is an emergency maintenance request that needs to be taken care immediately			TBD	9/24	9/24	TBD Assignment 2
1.2	Request Service	Normal Request	Communicate general service requests	Ross Faber	Ross Faber	The DRUMRS system will communicate using a notification that there is a low priority maintenance request that may or may not be fufilled.			TBD	9/24	9/24	TBD Assignment 2
1.3	Request Service	One task per request	Prevent multiple requests for the same issue	Ross Faber	Ross Faber	The DRUMRS system will only allow one request every 30 minutes (TBD) to prevent multiple requests for the same issue.	1.2		TBD	9/24	9/24	TBD Assignment 2
1.4	Request Service	Automatically assign priority	Easier to assign tasks based on a schedule	Ross Faber	Ross Faber	The DRUMRS system will automatically assign the priority based on the request and reference the University of Minnesota – Facilities Management Response Time Standards document. Priorties that are not emergency are as follow; urgent, expeditied, routine, fixed.	1.5	University of Minnesota – Facilities Management Response Time Standards	TBD	9/24	9/24	TBD Assignment 2
1.5	Request Service	Provide additional information	Easier to prioritze and assign tasks	Ross Faber	Ross Faber	The DRUMRS system will query for additional information regarding the request, such as the problem, contact information of the user, and the type of problem in order to easier assign and prioritize the issue.	1.4		TBD	9/24	9/24	TBD Assignment 2
1.6	Request Service	Template for general maintenance	Faster user use of DRUMRS	Ross Faber	Ross Faber	The DRUMRS system will have a template for the most common maintenance requests, such as toliet paper, markers, paper towels, lights, ect. (Need to be more specific on the common maintenance requests, TBD)			TBD	9/24	9/24	TBD Assignment 2
1.7	Request Service	Requests for cutom maintenance	Customizesd use of DRUMRS	Ross Faber	Ross Faber	The DRUMRS system will allow for custom requests that dont fit the usual template as explained in requirement 1.6 for a maintenance request.	1.6		TBD	9/24	9/24	TBD Assignment 2
1.8	Request Service	Call Center	Call center will be able to create tasks	Ross Faber	Ross Faber	When someone calls in to the call center with a request, the call center will be able to create a request just like any other user.			TBD	9/24	9/24	TBD Assignment 2
1.9	Request Service	Instructions for calling for request	System Notify CCMs when calling to Call Center	Chun F Chak	Chun F Chak	The System shall let CCMs know they are linking the conservation between CCMs and the staff of the Call Center.	1.8		TBD	10/7	10/7	TBD
1.1	Request Service	Request Points	Convenience of access to system	Amiel Hassan	Amiel Hassan	A system request point shall be placed in all rooms that are currently maintained by custodians and maintenance workers.			TBD	10/7	10/7	TBD
2.1	Maintenance Notifications	Nofitications for general Maintenance requests	Notify staff of maintenance requests	Ross Faber	Ross Faber	Once a service request has been sent, a notifcation that a new request has been filled will be sent to all levels of maintenance staff.			TBD	9/24	9/24	TBD Assignment 2
2.2	Maintenance Notifications	Turning off notifications	Some people may receive way too many notifications.	Ross Faber	Ross Faber	A staff member will be able to turn off notifications	2.1		TBD	9/24	9/24	TBD Assignment 2
2.3	Maintenance Notifications	Emergency Notification	Immediate response is needed for emergencies	Ross Faber	Ross Faber	(?) Staff will receive a more urgent notification it is an emergency. (How will it be more urgent?)	1.1		TBD	9/24	9/24	TBD Assignment 2
2.4	Maintenance Notifications	System Administrator notification	Interal notifications will be necessary for certain requests	Ross Faber	Ross Faber	System Administrators will be able to send out notifications to maintenance staff regarding certain tasks or announcements to staff			TBD	9/24	9/24	TBD Assignment 2
3.1.1	Accepting and Updating Tasks by General Maintenance Staff	Assigning staff to a task	Quickly assign tasks that they are working on/have time for	Ross Faber	Ross Faber	General staff will be able to assign task to themselves using the DRUMRS system			TBD	9/24	9/24	TBD Assignment 2
3.1.2	Accepting and Updating Tasks by General Maintenance Staff	Updating task's status	Conviently update tasks' status	Ross Faber	Ross Faber	General staff will be able to update the status of the task as Open, Scheduled, Completed,ect (Need confirmation of all type of statuses TBD)			TBD	9/24	9/24	TBD Assignment 2

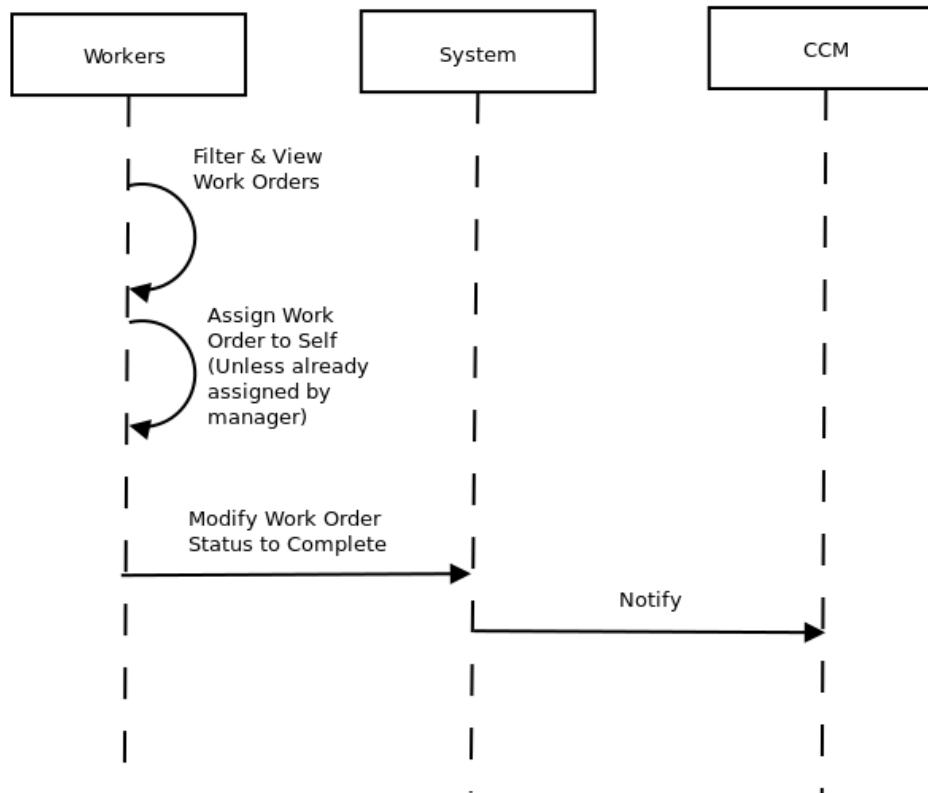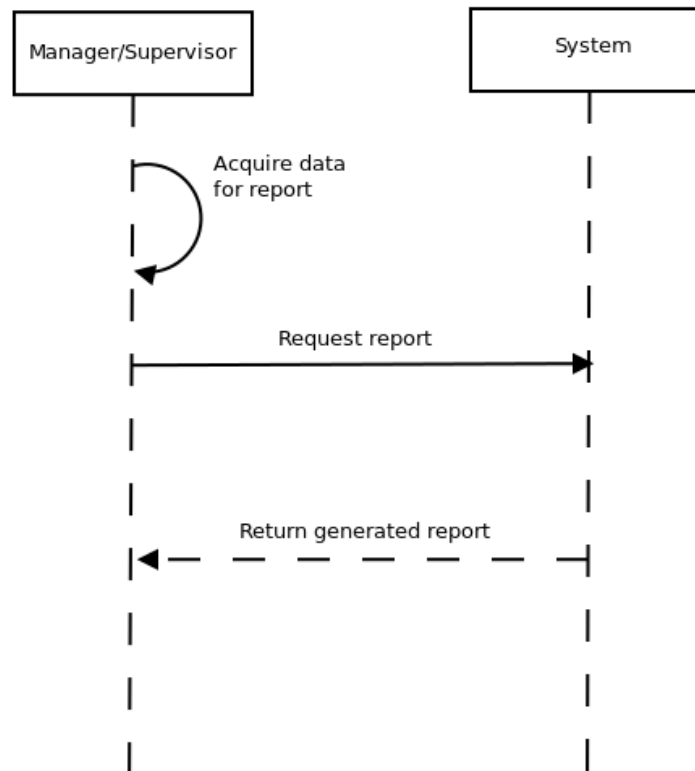|													
3.2	Accepting and Updating Tasks by General Maintenance Staff	Filter tasks	Quickly find necessary tasks	Ross Faber	Ross Faber	Staff will be able to filter tasks based on various attributes listed in requirement 3.2.1	3.2.1		TBD	9/24	9/24	TBD Assignment 2	
3.2.1	Accepting and Updating Tasks by General Maintenance Staff	Task attributes	Additional information needed for each task	Ross Faber	Ross Faber	Each task will have the following information; location (building, floor,room), problem, asset, contact information of the user who requested maintenance, start date, due date, priority, and type			TBD	9/24	9/24	TBD Assignment 2	
3.3	Accepting and Updating Tasks by General Maintenance Staff	Version Control	See who edited tasks	Ross Faber	Ross Faber	Every task must have history of who edited it, when, and when the edit was done.			TBD	9/24	9/24	TBD Assignment 2	
3.3	Accepting and Updating Tasks by General Maintenance Staff	Permanence of tasks	Responsibily of tasks	Ross Faber	Ross Faber	Tasks cannot be deleted.			TBD	9/24	9/24	TBD Assignment 2	
4.1	Assign Tasks to Staff by Maintenance Managers	Assigning staff to a task	Manage tasks of subordinates	Ross Faber	Ross Faber	Maintenance managers will be able to assign tasks to the maintenance staff that they manage.			TBD	9/24	9/24	TBD Assignment 2	
4.2	Assign Tasks to Staff by Maintenance Managers	Manager access	Do not want everyone to have the same access that managers do	Ross Faber	Ross Faber	DRUMRS will have an access heiracy, from general staff, manager, system administrator, IT (need to confirm different access TBD)			TBD	9/24	9/24	TBD Assignment 2	
5.1	Maintenance Manager report	Manager report	Report for important data statisitcs	Ross Faber	Ross Faber	Managers will be able to run a report for task allocation against a set of employees.			TBD	9/24	9/24	TBD Assignment 2	
5.2	Maintenance Manager report	Manager access	Allow only managers to run the report	Ross Faber	Ross Faber	DRUMRS system will only allow managers to run a report, as determined by the access from requirement 4.2	4.2		TBD	9/24	9/24	TBD Assignment 2	
5.3	Maintenance Manager report	notify IT team	Emergency happened to the system	Chun F Chak	Chun F Chak	DRUMRS system shall allow to complete a routine check and if there is any happen, it should notify the IT team or system Administrators			TBD	10/7	10/7	TBD	

Conceptual Model

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                          ┌─────────────────────┐
                          │ System Administrators │
                          └──────────┬──────────┘
                                     │
   ┌─────────────────────────────────┼──────────────────────────────────────┐
   ¦                                  │              DRUMRS System            ¦
   ¦                        ┌─────────┴─────────┐                            ¦
   ← Notify                 │ System Broadcast & │   Notify →                ¦
   ¦                        │ Work Order Notify  │                           ¦
   ¦                        └────────────────────┘                           ¦
   ¦                                                                          ¦
   ¦                        ┌────────────────────┐                           ¦
   ¦                        │ Generate Work Report│                          ¦
   ¦                        └────────────────────┘                           ¦
   ¦                                                                          ¦
   ¦                        ┌────────────────────┐                           ¦
   ¦                        │   Filter & View    │                           ¦
   ¦                        │    Work Orders     │                           ¦
   ¦                        └────────────────────┘                           ¦
   ¦   ┌──────────────┐                                                      ¦
   ¦   │  Managers &  │     ┌────────────────────┐                           ¦
   ¦   │ Supervisors  │     │  Modify Work Order │ On Work Order complete,   ¦
   ¦   └──────────────┘     └────────────────────┘ Notify CCM →              ¦
   ¦     Creates ↓                       ┌──────────┐    ┌──────────────────┐¦
   ¦                        ┌────────────┤  Notify  │    │ Custodial &       │¦
   ¦                        │ Assign Work │          │    │ Maintenance       │¦
   ¦                        │   Order     └──────────┘    │ Workers           │¦
   ¦                        └────────────┘               └──────────────────┘¦
   ¦                                                                          ¦
   ¦                        ┌────────────────────┐                           ¦
   ¦                        │  Create Work Order │                           ¦
   ¦                        └────────────────────┘                           ¦
   └──────────────────────────────────┼──────────────────────────────────────┘
                                       │
                          ┌────────────┴───────┐
                          │   Create Request   │
                          └────────────────────┘
                                       │
                          ┌────────────┴───────┐
                          │  CCMs / Call Center │
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Interaction Diagram 1

Workers Creating and Assigning Work Orders

Workers	System	CCM

Filter & View
Work Orders

Assign Work
Order to Self
(Unless already
assigned by
manager)
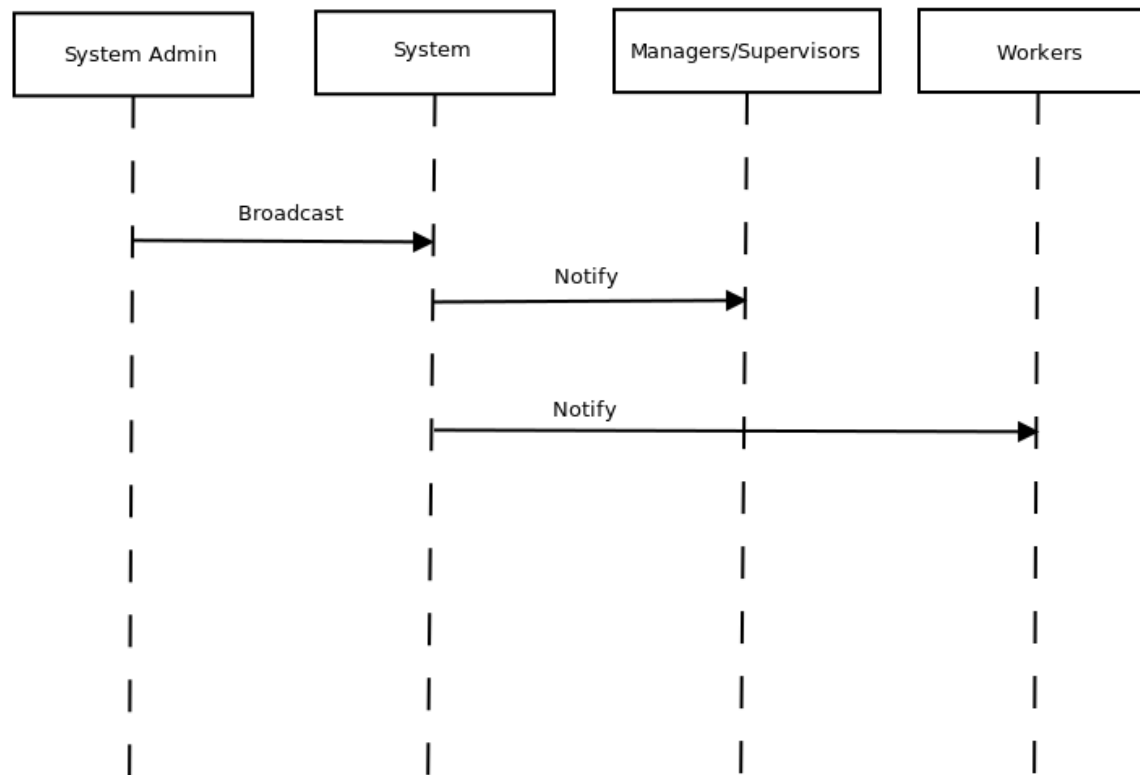
Modify Work Order
Status to Complete

Notify

Interaction Diagram 2

Manager Creating Reports

Interaction Diagram 3

System Administrator Notifications

Interaction Diagram 4

Managers Assigning Work Orders