Emergency Team Dispatcher
Release 1 Summary

1 Team Members

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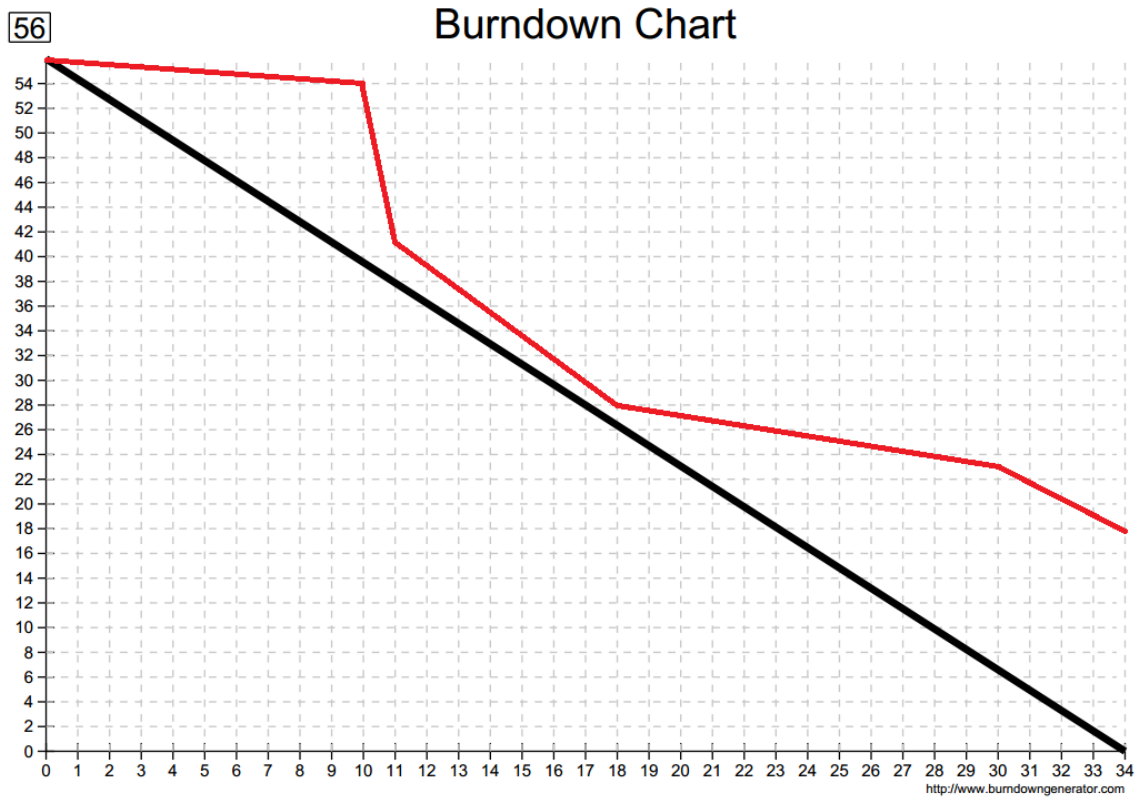
2 Project Summary

Our software, Emergency Team Dispatcher, will be used as a tool for a dispatcher to handle first aid teams in the context of a cultural or sport event. Teams can be assigned a sector to cover, or can be assigned onto an intervention to provide first aid services for a patient that requires medical attention. A team can also be used as backup for another team that needs advanced equipment to handle the emergency. Replacing the old paper-based system, the software will be used to move around teams and assign them to interventions. It will also document every team's movements and will be able to produce statistics on the overall first aid service provided in order to evaluate its quality. Documentation can also be used for any legal suit that is brought against our client, in order for them to prove that the correct procedure was followed and that there was no delay in the team's response.

3 VELOCITY



Velocity:

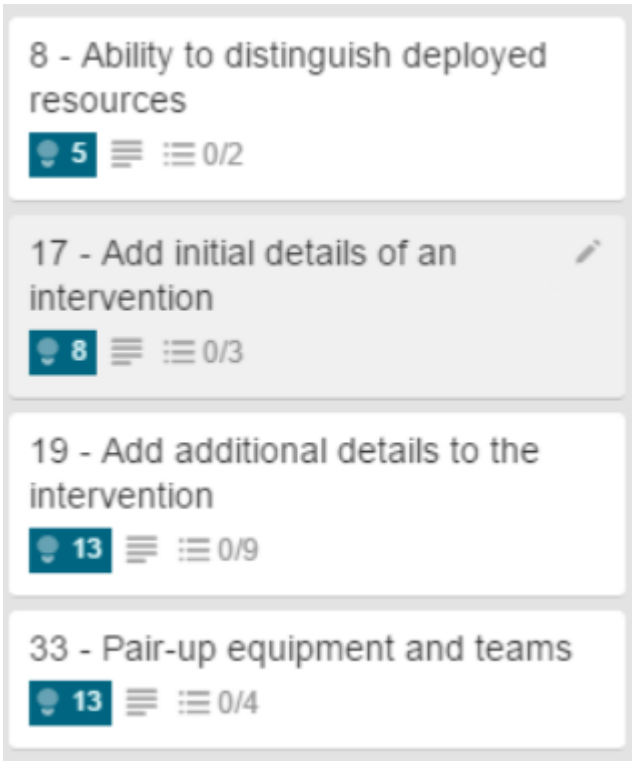
- Iteration #2: 27 Story points (Stories: **12**, **2**, 13 [10/13], 5 [2/5])
- Iteration #3: 26 Story points (Stories: **13** [3/13], **5** [3/5], 3 [12/13], 7 [2/5], 32 [6/8])

Average velocity:

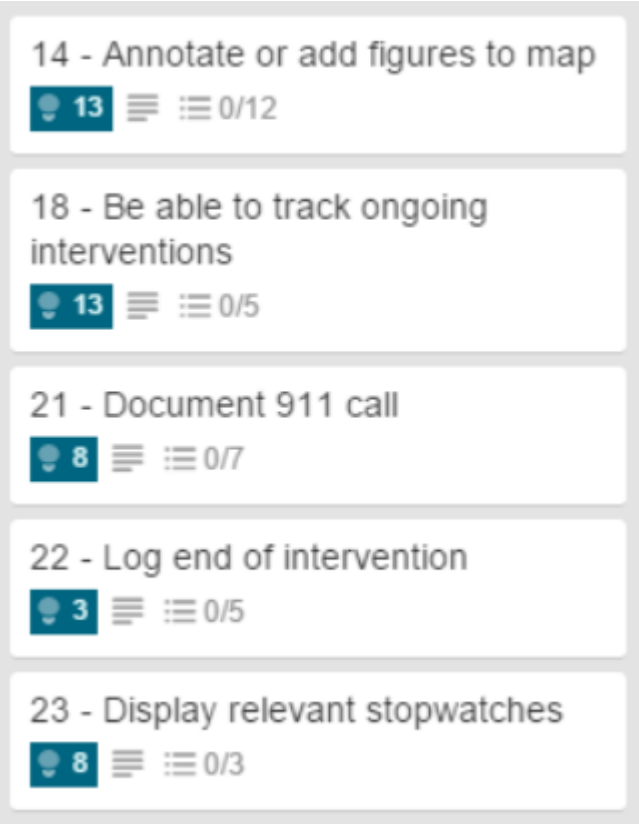
26.5 Story Points / Sprint

4 STORY MAP FOR NEXT RELEASE

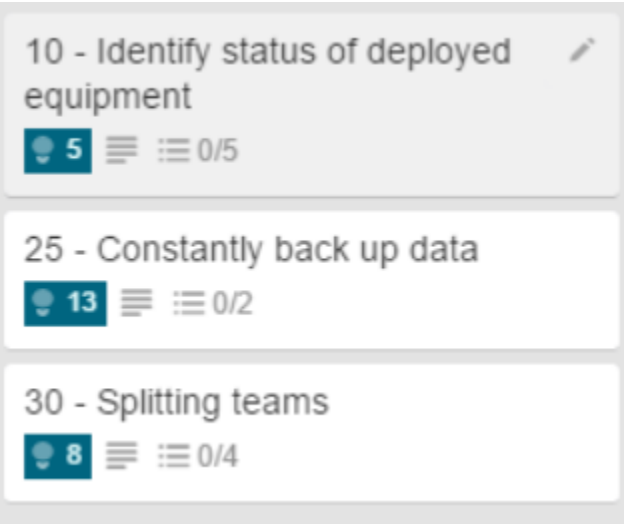
4.1 ITERATION #4:



4.2 ITERATION #5:

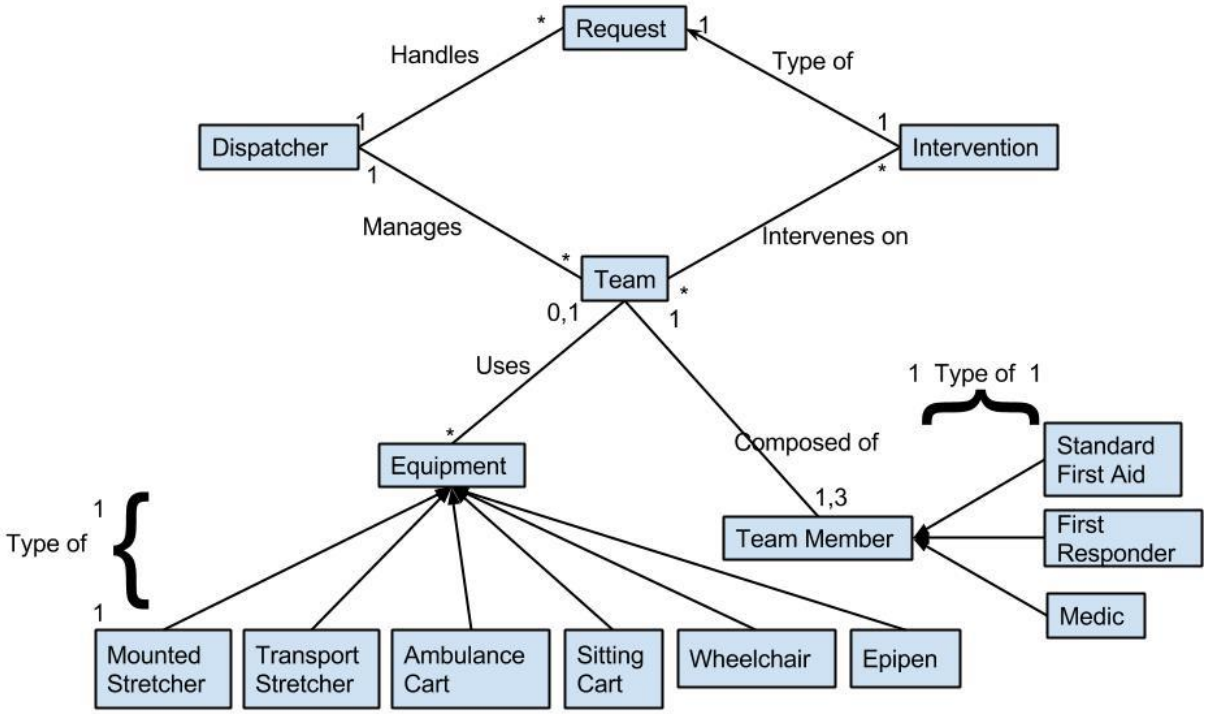


4.3 ITERATION #6:

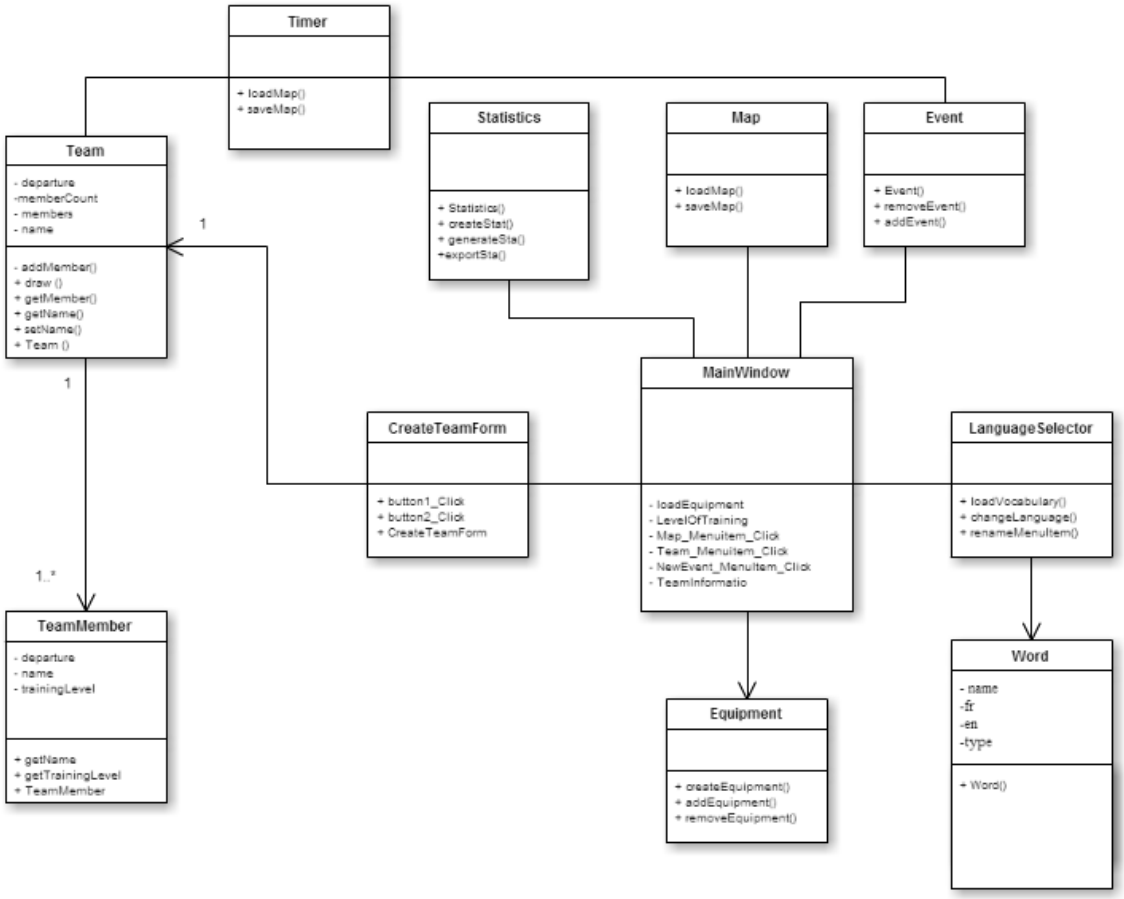


5 DIAGRAMS

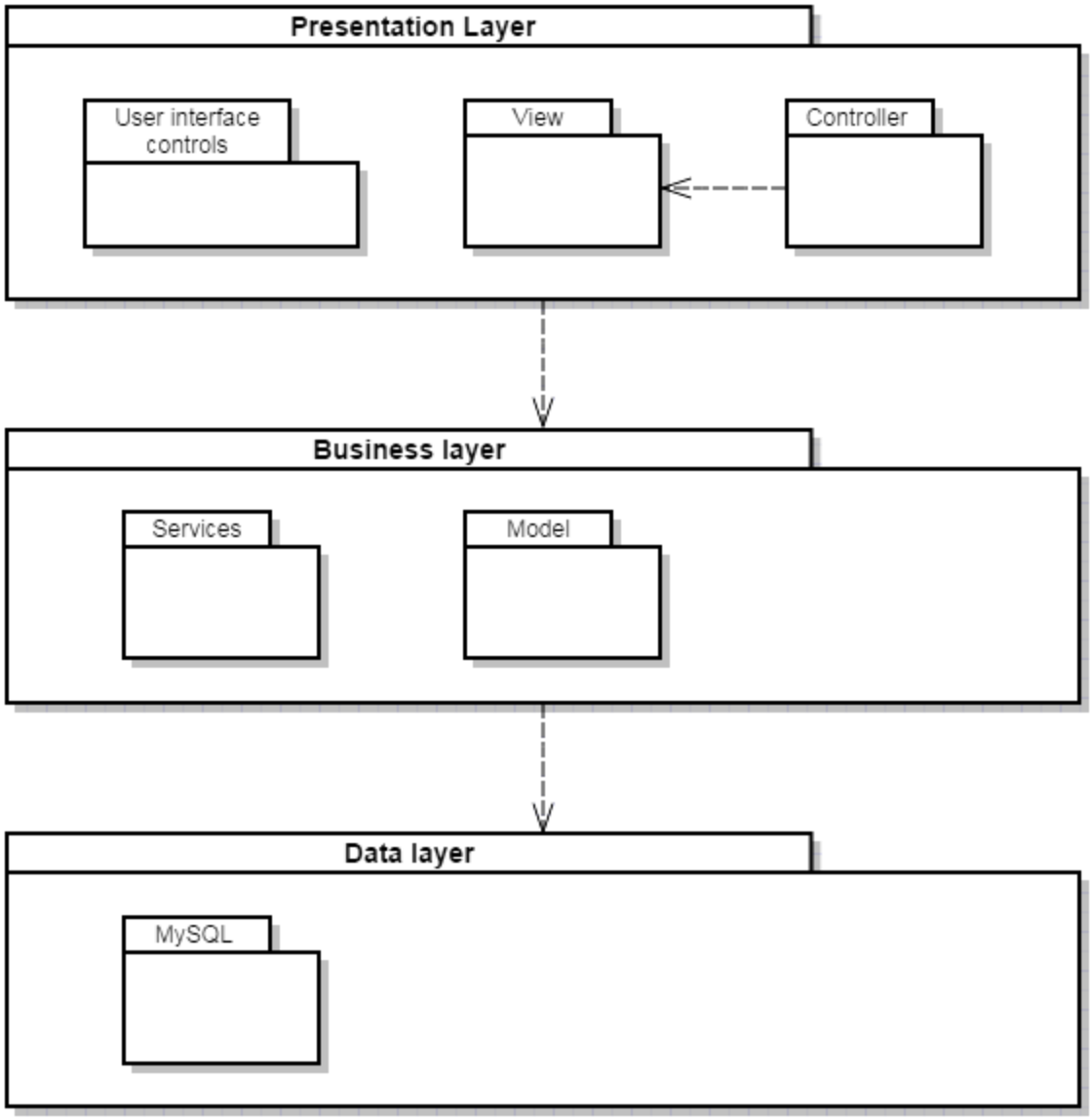
5.1 DOMAIN DIAGRAM



5.2 CLASS DIAGRAM



5.3 ARCHITECTURE DIAGRAM



For this project, the system we are building will be using a 3-tier client-server architecture. The 3-tier architecture consist of a Presentation, business and data layer. The presentation layer allows the user to interact with the application. It generates an output based on information retrieved from the domain layer. The business layer or application layer controls the application's functionality and represents the core logic of the system. Finally, the data tier provides data access services to the application layer.

This type of architecture allows a better separation of presentation and domain logic because the client tier will never communicate directly with the data tier. Every requests from the client tier must be handle by a middle ware tier (domain layer) first. Furthermore, because each layers are coupled to at most 2 layers, one above and one below, the system will be easier to maintain. By using this architectural style, we will also be able to increase our productivity since each layer can be developed independently and in parallel.

To implement this architectural style, we will be using the Model-view-controller (MVC) design pattern. The MVC pattern is composed of 3 main components distributed among the 3-tier client-server architecture. The Model contains the underlying data and controls the application's functionality. It is the only layer interacting with the database (SQL) It notifies its views when there has been a change in its state and is located in the application layer. The controller is in charge of handling events from the user interface. It notifies and updates its registered views by converting the input from the event into the appropriate command understandable for the model. It is located in the presentation layer as well as the view which implements the user interface.

6 STORY SUMMARIES

Story # 1: As a user, i want to be able to input basic information on the event such as its name, its acronym, shift starts and ends upon start-up of program, so that the documentations produced will be titled appropriately and data is isolated on a per-shift basis.
Feature :Part of the setup
Points:2, Priority: low, Risk: low
Summary : Upon opening the program, the user will be presented with a pane that will ask him for the above information such as his name, the duration of his shift, the name and location of the event. This information will be used later to automatically fill out forms.

Story # 2: As a user, I want to be able to import a map image into the software upon start up of the program, so that I'll have a visual representation of the site covered.
Feature :Part of the setup
Points:13, Priority: High, Risk: High
Summary : The user will be able to import a map of a variety of formats to use as the map for the event. This map will be the background of the drag and drop interface so as to allow the

user to place markers for events, teams and equipment. All image formats are accepted, PDF and GIF are not accepted for the map.

Story # 3: As a user, i want to be able to create teams, identify their training level and departure time, as well as document what equipment is in possession of the team , so that information on the team is logged and I'll be able to refer to this information later when a team with particular constraints is required.
Feature :
Points :13, Priority: High, Risk: Medium
Summary : The user will be presented with a form that he can fill out to add the information for a team into the program, this will allow him to then place the location of this team on the map as well as visually indicate their level of training and whatever equipment they're currently responsible for.

Story #4 : As a user, i want to be notified a specific time before a volunteer has to leave , so that I'll be able to retreat the volunteer back to base for his end of shift.
Feature :
Points:2, Priority:low , Risk: low

Summary : The program should automatically inform the operator when one of the members of a unit has to leave. This queue should be visual and not audio and should be difficult to miss.

Story # 5: As a user,i want to have the map cover the majority part of the screen , so that I'll be able to easily distinguish the items and the text that are displayed on it.
Feature :Part of the main program
Points :5, Priority: High, Risk: Medium
Summary : Since the map is the cornerstone of the Red Cross' operations and they need to know the location of all their teams at any given moment. The map should never be fully obscured by any of the interfaces available through the program and should always be readily accessible. This will enable the user to quickly identify where each team is and what they're doing.

Story #6 : As a user, i want to always have access to the map , so that my reaction time is not affected in case the need for a quick overview of the map and the position of the teams arises, especially in mass-casualty situation.
Feature :
Points:8, Priority: High, Risk: High
Summary : The map should always be available to the user. He should never have to first close a window to be able to access and modify information on the map.

Story # 7: As a user, i want to have teams or equipment represented on the map , so that I'll be able to visually track teams and equipment deployed on the site.
Feature :
Points :5, Priority: High, Risk: Medium
Summary : The teams and the equipment should have visual representations on the map, this should be able to be dragged and dropped as well as removed.

Story # 8: As a user, i want to be able to visually distinguish deployed resources on the map , so that I'll be able to quickly identify any given resource.
Feature :
Points:5, Priority:Medium , Risk: Medium
Summary : The resources on the map need to be represented in such a way that which symbol represents what is very obvious at first glance to the user so that they never have to waste time looking for anything. This will increase performance.

Story # 9: As a user, i want to be able to visually identify the status, level of training, and equipment carried by any given team , so that I'll be able to quickly identify the team that has the necessary requirements for an intervention or a backup request, without linearly going through all the teams information.
Feature :
Points:8, Priority: Medium, Risk: Medium

Summary : The teams need to have markers such as to make them distinguishable from one another and any special information about them (such as level of training or equipment carried) should also be obvious information. The goal of this is to reduce the amount of time the user has to spend analyzing the map in order to make the right decisions regarding deployment.

Story #10 : As a user, i want to be able to visually identify the status of the equipment deployed , so that I'll know if this resource can be used for an intervention.
Feature :
Points:5, Priority: Medium , Risk: low
Summary : The equipment is not always deployed. As such there must the a visual identifier to tell the user which equipment is currently in use, which is ready to be deployed and which is being maintained/restocked.

Story # 11: As a user, i want to be able to assign teams onto sectors for each time interval , so that I'll be able to visually identify which sector are they assigned to next.
Feature :
Points:8, Priority: low, Risk: Medium
Summary : It is important for the user to be able to see which area each team is assigned to patrol currently as well as which area they are to move to next. This information should be accessible through the team's interface.

Story # 12: As a user,i want to be able to move the representation of a team or equipment on the map , so that the map displays the most current information of the teams or equipments position.
Feature :change of position
Points :2, Priority: High, Risk: High
Summary : The map must always be updated after a team is moved and this information must be saved in the event of a system crash.

Story # 13: As a user, i want to have the movement of the representation of a team or equipment be done in an intuitive fashion, as close as possible to the way this movement is executed using the current paper-based system , so that it is easier for new users to learn the software.
Feature : drag-and-drop
Points :13, Priority: High, Risk: High
Summary : The drag and dropping of the boxes should be done in such a fashion that it’s obvious and intuitive to even the most novice users as well as users who’re not necessarily comfortable on a computer.

Story #14 : As a user, i want to be able to annotate or be able to add simple figures onto the map in order to add useful information, so that I'll be able to identify certain locations by their annotated name, safety passages, access ramps, or any other pertinent information that increases my efficiency.
Feature :
Points:13, Priority:Medium , Risk: Medium
Summary : The user should be able to add annotations to the map once its imported so as to represent various things such as the names of specific booths or the additions to the map that were not previously there. In our implementation this is currently outsourced to another program that will allow the user to modify the image directly and then import it after.

Story #15 : As a user, i want to be able to save the map with all its added modifications, so that I'll be able to use this modified map at a future date.
Feature :
Points:20, Priority:low , Risk: high
Summary : The user must be able to save the map, complete with any modifications they've made, and reload that version of the map. This will be useful for multi-day events as well as to restore current status in the event of a system crash.

Story # 16: As a user, i want to be able to add an interventions position directly to the map , so that I'll be able to visually identify the closest team to the interventions position.
Feature :This is the start of the process of adding a new intervention
Points:13, Priority: high, Risk: Medium
Summary : When an intervention is created, the user should be able to place its location immediately on the map. Furthermore there should be an option to set the system in a mode that will allow the user to simply add interventions to the map and define them later.

Story # 17: As a user, i want to be able to input the initial details of an intervention upon its creation such as who called the intervention, where is it, and what was it declared as , so that a log of the intervention is created with initial reported details.
Feature :Should be initiated right after the addition of the interventions position to the map but should be shippable (non-modal) in case of high demand Floating window on top of the map
Points:8, Priority: ,Medium Risk: low
Summary : The input of these information will initiate the intervention object and create a new entry to that effect within the database. This object and this entry will be used to log the rest of the information related to that intervention. It will also add the intervention onto the active intervention queue at the bottom of the page.

Story #18 : As a user, i want to be able to track all the ongoing interventions, so that I can identify the needs and/or the resources that are busy with the intervention.
Feature :Bottom bar that hold all the active interventions with the option to temporarily show all interventions
Points:13, Priority: Medium, Risk: Medium
Summary : All active interventions along with all relevant information including the teams that are intervening, the intervention stopwatch, and the basic intervention information will be displayed at the bottom of the page so that the dispatcher is able to know at a quick glance, what are the current interventions and what resources are they occupying.

Story # 19: As a user, i want to be able to add additional details to the intervention such as the priority code of the intervention, the gender and age of the patient, the classification under which this intervention falls in, as well as any other pertinent information, so that the intervention is completely documented for future use or review.
Feature :
Points:13, Priority: Medium, Risk: Medium
Summary : All the information gathered will be logged and added to the database for insertion into the documentation and for production of the statistics

Story # 20: As a user, i want to have tips shown to me that contain pertinent questions to ask the team when I select a particular category for an intervention , so that the software will

help me get a better idea of the exact nature of the intervention as well as get a sense of its urgency.
Feature :
Points:3, Priority:low , Risk: low
Summary : These tips will help the dispatcher ask relevant questions to the team or inform them of the particular procedure to follow in that case so that the chances of the team making a mistake is reduced.

Story #21 : As a user, i want to be able to document information related to a 911 call for a particular intervention such as the time at which the call has been made, the meeting point with the team, and the information of the vehicles that responded along with their time of arrival , so that the intervention of the local emergency services is documented.
Feature :
Points:8, Priority:Medium , Risk: Medium
Summary :This feature is part of the logging of information for the intervention and will be handled the same as the latter.

Story #22 : As a user, i want to be able to log the end of the intervention, so that all the details relating the intervention are documented and to mark the intervention completed thus removing it from the ongoing interventions list.
Feature :
Points:3, Priority: Medium, Risk: Medium

Summary : The end of the intervention will remove the intervention from the active intervention section and will be logged in the database and documentation. Statistics on this intervention will then be generated will be added to the list of statistics already gathered.

Story #23 : As a user, i want to have relevant stopwatches displayed to me with relation to an intervention , so that I'll be able to identify a task that is taking more time than it should.
Feature :The software should know what is a relevant timer for the intervention
Points:8, Priority: Medium, Risk: Medium
Summary : Those stopwatches will allow the user to monitor interventions. If any activity lasts too long, the dispatcher will take action to get informed on the reason why it is taking long or correct the situation immediately. The stopwatches will appear in the active interventions section.

Story #24 : As a user, i want to have a visual alarm or notification displayed to me when a certain activity lasts more than its preset threshold , so that I would remember to take corrective actions to fix this problem.
Feature :Switching from dark writing on a bright background to white writing on a dark background
Points:2, Priority:Low , Risk: Low
Summary : This will “nudge” the user about a particular situation that can affect quality of the service. This notification will be used when a team takes too long to find the patient, when

the backup takes too long to assist the initial team, when an intervention lasts too long and occupies a team for all that time.

Story #25 : As a user, i want to have all the data created constantly backed up , so that i can avoid losing data in case my computer crashes.
Feature :
Points:13, Priority: Medium , Risk: Medium
Summary :Intermittent backup of all data as a text or excel file as well as in the database so that the program and event can be resumed on another machine or the dispatcher has sufficient information to carry his operation in case the user only has a Mac or Linux machine

Story # 26: As a user, i want to be able to view statistics during the event to identify weaknesses in our operation , so that I would take corrective actions to address the situation.
Feature :
Points:5, Priority: Low , Risk: Low
Summary : Those statistics allow the user to identify precarious situations that affect his operation. It will allow him to correct those situations on-the-fly so that the quality of the service is enhanced for the rest of the shift.

Story # 27 : As a user, i want to be able to get extensive statistics on the operation on a shift by shift basis as well as for the whole operation, so that those statistics can be shared with our client.
Feature :
Points:13, Priority: Medium, Risk: high
Summary : Statistics are be used to quantify and qualify the quality of the service provided.

Story #28 : As a user, i want to the software to produce and allow exportation of documentation that contains at least the same amount of information as the paper-based system currently used , so that there exists a consistency between systems.
Feature :
Points:13, Priority: High, Risk: High
Summary : Documentation and statistics are a crucial feature in this software due to legal reasons. All team movements should be documented and be used as a reference should a legal suit be filed against the Red-Cross.

Story # 29: As a user, i want to be able to switch users, so that the statistics document will reflect exactly who was dispatching calls at a particular time.
Feature :
Points:2, Priority:Low , Risk: Low
Summary : The dispatcher can sometimes take a break and all calls can be handled by another person that replaces him at his command post. The documentation should reflect

that change for legal reasons. This will be handled by a login of the dispatcher with his name only (no need for password - honor system).

Story # 30: As a user, i want to be able to split teams into several fragments if they get a second intervention while occupied by a first intervention , so that the documentation reflects which team intervened on a particular intervention and I can visually identify what the team is doing on the map.
Feature :
Points:8, Priority: Medium, Risk: Medium
Summary : A team can, in some cases, intervene on several patients at a time. Usually the team will call backup until there is one team per patient, but for the time span until the backup arrives, the team should appear (visually and in the documentation) as intervening on both patients at the same time, thus appearing as several “fragments” of the initial team.

Story #31 : As a user, i want to have the access to the statistics on any operation protected by a password , so that unauthorized personnel won't be able to get confidential information on the Red Cross operations.
Feature :
Points:2, Priority: Low, Risk: Low
Summary : When the user desires to view the statistics that were produced for any operation, he is going to be required to login with a username and a password.

Story # 32: As a user,i want to be able to create equipment in the software , so that all the equipment deployed during an operation appears in the software.
Feature :
Points :8, Priority: High, Risk: Medium
Summary :There are 6 types of equipment that can be created: Ambulance cart, sitting cart, mounted stretcher, transport stretcher, Epipen, and wheelchair. A button will be used in order to create those items.

Story # 33: As a user,i want to be able to pair-up equipment and teams , so that I'll know which team is in possession of which piece of equipment throughout the operation.
Feature : Team Dispatching
Points : 13, Priority: High, Risk: Medium
Summary : A simple drag-and-drop of the equipment onto the teams representation will pair them up and the equipment will appear in the teams description. It will indicate to the user that a particular team is in possession of a particular equipment.