Synergy Distributed Meeting Scheduler System

*Project Phase I*

**System Requirements Specification**

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**Requirement Engineers of Team -4**

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Website link:

[www.utdallas.edu/~mahbub.haque/SDMS1.pdf](www.utdallas.edu/~mahbub.haque/SDMS1.pdf)
[www.utdallas.edu/~mahbub.haque/SDMS1.doc](www.utdallas.edu/~mahbub.haque/SDMS1.doc)
1. Abstract

“The hardest single part of building a software system is deciding precisely what to build. No other part of the conceptual work is as difficult as establishing the detail technical requirements, including the entire interface to people, to machines, and to other software systems. No part of the work so cripples the resulting system if done wrong. No other part is more difficult to rectify later.”

[Brooks, 1987]

Requirement Specification is a document which tells what to build. It tells what is expected from the system and how the system should behave under certain situation. It answers all types of questions related to the software to be built. The Requirement Specification Document is not just a list of requirements; moreover, it helps the project stakeholders reach an agreement on the functionalities of the system and the conditions to which it must conform.
2. Introduction

SynergySoft™, Inc. is proposing an innovative approach to a new product called Meeting Scheduler, to help people schedule their meetings. Many software vendors are eager to offer such a system, especially one with a powerful vantage point (e.g. Microsoft, IBM-Lotus, etc.). Within the last few months, SynergySoft™, Inc. has gathered some initial requirements from potential customers. However, the company is well aware that they have not clearly characterized what their customers really want, not to mention who their real customers might be. Consequently, the requirements definition is only preliminary, sketch, imprecise, incomplete and possibly inconsistent.

Furthermore, SynergySoft™, Inc. is also aware that getting the right requirements the first time will be the barometer to successfully completing the entire development effort, reducing production time, and to keeping up its well-established reputation and ultimately to satisfying their workforce and customers. In essence, SynergySoft™, Inc. is looking for the expertise of T4 Consulting to deliver a detailed requirements description, which precisely, concisely and conceptually as possible captures real customer’s real needs or wants.

2.1 Purpose

The purpose of this document is to define the requirements gathering process used to elicit requirements from the product stakeholders, to list the enterprise and the system functional and non-functional requirements that are essential to the success of this product, describe the issues and improved understanding in the process. This document also presents a prototype of the product.

2.2 Scope

This document is intended for providing an abstract overview of the Meeting Scheduler and a general overview of the entire project. The Enterprise Functional and Non-Functional requirements, Stake Holders, Team Architecture, System Functional and Non-Functional Requirements are the scope of this document. Our system would be able to plan and re-planning meetings given a date range, support parallel meetings and virtual meetings (like teleconferencing). The systems will be usable by non-experts and customizable to professionals as well. The document is also intended to provide a prototype of the Meeting Scheduler system.

2.3 Definitions, acronyms and abbreviations

T4 – Team Four Consulting

Confirmed meeting participant - A potential meeting participant after the participant has accepted (“will attend”) a meeting

Exclusion set: a set of dates on which participants cannot attend the meeting
**Preference set:** a set of dates on which participants would prefer the meeting to take place

**Date range:** a time interval established by the meeting initiator during which he would like the meeting to occur

**Active participant:** a participant who will play a major role in the meeting and is responsible for specifying equipment requirements; is identified by the meeting initiator

**Important participant:** a participant who is necessary to the purpose of the meeting and is given the privilege of requesting a meeting location preference; is identified by the meeting initiator

**Potential meeting participant** - A person who has been invited to a proposed meeting that has not either accepted (“will attend”) or refused (“will not attend”)

**Meeting proposal** - An invitation to a meeting including the meeting topic, date range, and duration that is sent to a list of potential meeting participants

**Duration** - The time span of a proposed meeting

**Strong date conflict:** a conflict when scheduling the meeting date that occurs when no date can be found within the date range and outside all exclusion sets

**Delegate:** To have another person act on your behalf by authorizing them certain functions to perform

**Virtual meeting** - A meeting simultaneously held at multiple remote locations, e.g. teleconferencing

### 3. Requirements Process

To gather the requirements for enterprise and system domain of the meeting scheduler, we followed a systematic approach. First, we extracted the important statements given in the specification by SynergySoft™. Then we constructed the initial dependency diagrams for the enterprise and system domain requirements. Next we tried to identify issues related to these requirements and resolved those issues. Finally, we made changes in our initial dependency diagrams and came up with an improved version of those diagrams. Finally, based on our improved understanding we developed a mock prototype of the system.

During the requirements gathering process, we identified stakeholders of 4 different worlds – subject, user, developer, and system representing 1) the subject matter or domain experts of the scheduling and meeting organization, 2) the product customers and eventual users of the meeting scheduling system, and 3) the software architects, designers, implementers, testers, and maintainers of the planned software system, resulting in 4) the stated requirements of the planned system.
3.1 Stakeholders

The following roles were played by the requirement engineers of group 4 during the requirements elicitation process.

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Role Played</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carl, Ramakrishna</td>
<td>User World</td>
</tr>
<tr>
<td>Mahbubur</td>
<td>System World</td>
</tr>
<tr>
<td>Sujith</td>
<td>Subject World</td>
</tr>
<tr>
<td>Muaz</td>
<td>Developer World</td>
</tr>
</tbody>
</table>

3.2 Resources used in Elicitation of Requirements

We primarily used the specification provided by SynergySoft™ as the primary source of requirements for the meeting scheduler system. However, we also looked at the following sources as a secondary source of requirements.

1. Previous Project – SDMS – Jung-Chi Lin, Arundhati
2. Previous Project – SDMS - Yasaman Haghpanah, Ravindra Rudraraju, Sowjanya Sakruti, Jim Whitaker
3. Customer interviews

4. Semi formal Requirements: Preliminary Definition

Requirements often contain problems like ambiguity, redundancy, information omission, inconsistency etc. These errors have to be identified and corrected as early as possible of the software development lifecycle. For this, one efficient way is to come up with a semi-formal representation of the requirements so that the requirements are more understandable and the errors can be clearly identified and corrected immediately. Dependency graph is one of the most effective tools. Therefore, we came up with the dependency graphs for the enterprise and system requirements so to identify the flaws and errors within the requirements.

4.1 Enterprise Requirements: (Initial Understanding)

Based on the specification provided by SynergySoft™ we initially identified functional and non-functional requirements that are listed below. Since these are the requirements we listed initially, the ID numbers of these requirements include “v01”.
4.1.1 Functional Enterprise Requirements: (Initial Understanding)

EFR-1 v01: Meeting initiator will ask all potential meeting attendees for set of dates they cannot attend the meeting (exclusion sets) and the set of dates they can attend the meeting (preference sets).

EFR-2 v01: A meeting date shall be defined by a pair (date, time).

EFR-3 v01: The exclusion and preference set should be contained in some time interval described by the initiator.

EFR-4 v01: Initiator may ask active participants to provide any special equipment requirements on the meeting location.

EFR-5 v01: Initiator could also ask important participants to provide and special location they prefer.

EFR-6 v01: The proposed meeting date should belong to the stated date range and to none of the exclusion sets.

EFR-7 v01: Date conflict occurs when no such date (which belongs to the stated date range and to none of the exclusion sets) can be found.

EFR-8 v01: A conflict is strong when no date can be found within the date range and outside all exclusion sets.

EFR-9 v01: A conflict is weak when dates can be found within the date range and outside all exclusion sets, but no date can be found at the intersection of all preference sets.

EFR-10 v01: Conflicts can be resolved by:

EFR-10-1 v01: The initiator extends the date range.
EFR-10-2 v01: Some participants remove some dates from their exclusion set.
EFR-10-3 v01: Some participants withdraw from meeting
EFR-10-4 v01: Some participants add new dates to their preference set.

EFR-11 v01: Meeting room should be available at the selected meeting date.

EFR-12 v01: Meeting room should meet the equipment requirements.

EFR-13 v01: Meeting can be held in the virtual place.

EFR-14 v01: The meeting initiator can be one of the participants or some representative (e.g. a secretary)
4.1.2 Non-Functional Enterprise Requirements:

ENFR-1 v01: The proposed meeting date should ideally belong to as many preference sets as possible.

ENFR-2 v01: The proposal of a meeting date should be made as early as possible.

ENFR-3 v01: Meeting room should belong to one of the locations preferred as many as important participants as possible.

ENFR-4 v01: Conflict resolution should be done as quickly as possible.

ENFR-5 v01: Conflicts should be resolved with no more interactions than is really needed (minimal number of interactions).

ENFR-6 v01: It is absolutely necessary, however, to allow each meeting to take place in a virtual place, e.g., through teleconferencing using laptop computers. This flexibility is crucial in future.

ENFR-7 v01: The number of negotiations should be kept minimal.

ENFR-8 v01: A new round of negotiation may be required when no such room can be found.

Based on our initial findings of the functional and non-functional requirements we constructed the following dependency diagram for the enterprise domain. It is given in the next page.
Meaning of Notations Used:

- x -> y: Non Functional requirements
- X: Functional requirements

Fig: Dependency diagram for Enterprise Requirements (Initial Understanding)
4.2 System Functional Dependency Diagram (Preliminary)

This was our preliminary dependency diagram. From it we realized two kind’s issues:
1) The first was with the system requirements presented to us and this is described in great
detail in the system functional issues and solution section
2) The second was over sight on our part where we missed out on some of the key terms but
have included these terms in our final draft.

Fig: Dependency diagram for System Functional Requirements (Initial Understanding)

Meaning of Notations Used:

$x \rightarrow y$
Means X depends on Y

: Functional requirements
4.3 System Non-Functional Requirements (Preliminary)

Non-Functional requirements in a software systems engineering indicates how the system will do the required functions. They are always informally stated in a contradictory manner making difficult for the developer. The picture below indicates the preliminary stage of Non-Functional requirements of this system. The incompleteness of the picture shows the uncertainty of the requirements due to various issues present in the system description.

**Fig:** Dependency diagram for System Functional and Non-Functional Requirements (Initial Understanding)

<table>
<thead>
<tr>
<th>Meaning of Notations Used:</th>
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<tbody>
<tr>
<td><img src="" alt="Diagram" /></td>
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</table>

Means X depends on Y
5. Issues & Solutions

After analyzing our initial dependency diagram closely, we could find out a number of issues with our initial understanding of the enterprise requirements. We categorized these issues under four different types of problems: ambiguous, incomplete, inconsistent and redundant.

5.1 Issues & Solutions (Enterprise Requirements)

5.1.1 Ambiguous:

We found the following statements ambiguous in the domain theory given by SynergySoft™:

- **Issue -1:** In the domain theory we have a statement like this: “Initiator may ask active participants to provide any special equipment requirements on the meeting location.” This is an ambiguous statement and leads to a question “what happens when the initiator doesn’t ask active participants to provide special equipments?”

  **Solution:** We resolved this issue by rephrasing the statement as: “Initiator asks the active participants to provide meeting equipments or he provides them himself.”

- **Issue -2:** Another ambiguous statement we have in the domain theory is: “Initiator could also ask important participants to provide any special location they prefer.” This also leads to a question: “what happens when the initiator doesn’t ask important participants to provide their location preferences?”

  **Solution:** We resolved this issue by rephrasing the statement as: “Initiator asks important participants to provide their preferred meeting places or he decides the place himself.”

- **Issue -3:** We found a statement in the enterprise requirements that “The meeting initiator can be one of the participants or some representative (e.g. a secretary)”. This doesn’t specify clearly who can be a meeting initiator and who can not. Also, this leads to a question “If the meeting initiator is some representative (e.g. a secretary), is it required for him or her to attend the meeting”.

  **Solution:** We resolved this issue by rephrasing the statement as: “Initiator is one of the potential participants of the meeting and he or she is not required to attend the meeting. However, unlike other potential participants he / she has the responsibility to organize a meeting successfully.”
5.1.2 Incompleteness:

- **Issue -4:** Another issue we found was, we felt that participants were not defined properly (e.g. "potential participants")
  
  **Solution:** We came up with our definitions for different kinds of meeting participants in section 1.3.

- **Issue -5:** We had a domain level question which was not answered by the Enterprise requirements and the question was: “How do we make sure if the meeting place has sufficient equipments?”
  
  **Solution:** The solution we came up with for this was like this: “An update should be made, within the SDMS system, if all the meeting equipments are available.”

- **Issue -6:** Another domain level question was: “What happens when there are different meeting places proposed by important participants?” This was not answered by the Enterprise requirements given by SynergySoft™.
  
  **Solution:** The solution we came up with for this was: “The initiator resolves this by choosing a meeting place, especially when same numbers of important participants choose different meeting locations.”

- **Issue -7:** We felt the definition of “virtual meeting place” was incomplete.
  
  **Solution:** For the time being, we consider virtual meeting place as only teleconferencing using via laptops / desktops. (But we have plans to come up with a better definition in future.)

- **Issue -8:** About the virtual meeting place we could not decide where should we place it in the dependency diagram: if we should consider it a special type of meeting place or a different type of entity.
  
  **Solution:** For our SDMS system, we consider virtual meeting place as a different type of place than a physical meeting place and kept it as a separate from the physical meeting places.

- **Issue -9:** Another potential problem is, only dates are specified in the preferred sets, but not time. What if a person is available at daytime but not some time (say, 10:00 pm) should he put that particular date in his preferred set or exclusion set?
  
  **Solution:** Our solution is: if an individual puts a date into his preferred set, we assume, for the time being, that the individual is available for the whole day.

- **Issue -10:** It is stated in the enterprise requirements that when there is a conflict, one of the ways it can be resolved is, the meeting initiator extends the “date range”. Now, the issue here is, there is no point of making such changes at the eleventh hour (e.g. just
before the meeting). Because these changes will not be effective. To make these changes effective, it should be done well ahead of time.

**Solution:** We solved this by introducing a “time bound” for each of the changes related to a meeting. For instance, the meeting initiator can’t change the “date range” for the meeting on a scheduled meeting date. He has to make such changes at least 24 hours earlier of the meeting start time.

- **Issue -11:** It is stated in the enterprise requirements that when there is a conflict, one of the ways it can be resolved is, the meeting initiator requests the meeting attendees to change their “preferred set” and “exclusion set”. Now, these changes again will not be effective if they are done just before the meeting start time.

**Solution:** The solution for this problem is again the same: a “time bound” on the changes on “preferred set” and “exclusion set”.

### 5.1.3. Inconsistent / Redundant:

- **Issue -12:** We identified a statement like this: “It is absolutely necessary, however, to allow each meeting to take place in a virtual place….” We classified the phrase “absolutely necessary” as a problematic phrase.

**Solution:** The word "absolutely necessary" is highly inconsistent because there is no absolute thing with humans. So, we got rid of it from our revised dependency diagram for enterprise requirements.

### 5.2 Issues & Solutions (System Functional Requirements)

#### 5.2.1 Incomplete or Omission:

- **Issue-1:** The functional system requirements states: to support conflict resolution according to the policies stated by the client but there are no such policies defined anywhere in the system functional requirements.

**Solution:** Would have to contact the Client to resolve the issue. At this point we are assuming that the client resolution policy would be a refinement of conflict resolution policy. For example, one of the conflict resolution policy states that initiator extend the date range. The resolution policy would have the specifics regarding the date extension. The upper and lower bounds on the date extension.

- **Issue-2:** We see another instance of incompleteness under changing user constraints. It states that “In all cases some bound on re-planning should be set up”. This bound is not defined anywhere in the requirements.

**Solution:** Here we decided to set bounds on the number of times a meeting can
be re-planned and the extent to which we can modify the exclusion and preference set.

5.2.2 Ambiguity:

- **Issue-3**: Monitor meetings in system functional requirements is not well defined, very vague. No where does it mention what aspect needs to be monitored. Do we need to monitor parallel meeting or is it the content of the meeting that we need to be monitoring?

  **Solution**: Due to its vague nature and the fact that it could not be quantified we decided to move it over to non-functional system requirements

5.2.3 Redundancy:

- **Issue-4**: Making participants aware and informing participants under managing interactions in the system functional requirements seem redundant.

  **Solution**: Merged informing and awareness

5.2.4 Misclassification:

- **Issue-5**: In the midst of the managing interactions for the system functional requirements the term reliability was used which is purely suppose to be a non functional requirement

- **Issue-6**: The term confident (making participant confident) was also used under managing interactions though it was not an “ility”, it is still a non functional term because it cannot be quantified.

  **Solution**: Moved the requirements over to non functional system requirements

5.2.5 Contradictory:

- Issue-7: The system functional requirements state: that for a given meeting request the SDMS is to determine a date and location. This might contradict with the re-planning phase where a possibility arises when a meeting might be cancelled and therefore yielding no date or location.

  **Solution**: Clarified the matter by permitting the possibility where the system would not return a date or location
5.3 Issues & Solutions (Non-Functional Requirements)

5.3.1 Ambiguity

- **Issue-1:** The description of the project is done using several abstract terms which fail to give a clear idea leading to ambiguity. For example, flexibility, reliability, system, etc. It is difficult to implement these abstract terms for the developer without clear clarification.

  **Solution:** This issue could be solved by getting clear description from the customer in a time to time manner. It is required to get clarified with the customer as the meaning of the abstract terms depends on the particular part of the project.

5.3.2 Redundancy

- **Issue-2:** The description of the project contains many terms repeated which leads to unwanted distraction. These repetitions make it difficult for the developer to make a decision based on the description. For example, we could find several requirements repeated under different classifications.

  **Solution:** This issue could be easily resolved with the help of the customer where more clarification might be needed.

5.3.3 Inconsistency

- **Issue-3:** The requirements are stated in randomly rather than stating the needs from user and system perspective. Such requirements bring in the inconsistency in the description making it difficult for the developer.

  **Solution:** These inconsistencies could be solved by the proper understanding of the system through repeated analysis. Such understanding would clearly give the requirements from various perspectives.

5.3.4 Incompleteness

- **Issue-4:** The lack of description in a technical manner leaves many requirements incomplete. In order to make a perfect implementation the developer needs the description in standard formal terms. For example, in many places the number of participants is stated informally without giving out the right count.

  **Solution:** This issue could be solved based on the need of the system for the customer and with proper interaction with the customer.

The uncertainty of the Non-functional requirements is evident from the above issues. They are always stated in an informal way which needs more interaction with the customer based on priority.
6. Improved Understanding

We identified important issues regarding the enterprise and system requirements and tried to resolve these issues with an improved understanding. Also, we constructed a new version of the dependency diagrams in which we resolved most of the issues we identified.

The following list contains our improved understanding of the functional and non-functional requirements.

6.1 Enterprise Requirements: (Improved Understanding)

6.1.1 Enterprise Functional Requirements

EFR-1: A “meeting initiator” shall initiate a meeting by deciding on a “meeting topic”, by selecting a list of “important participants”, “active participants”, and by selecting a “date range”, “duration”, and “location” for the meeting.

EFR-2: A “meeting initiator will ask all potential meeting attendees for set of dates they cannot attend the meeting (exclusion sets) and the set of dates they can attend the meeting (preference sets)

EFR-3: A “meeting initiator” shall be one of the “potential meeting participants” by default but he/she may or may not be present in the meeting.

EFR-4: A meeting date shall be defined by a pair (date, time).

EFR-5: The “meeting initiator” may designate one or more “potential meeting participants” as “important” meaning that their attendance at the meeting is required in order to have the meeting.

EFR-6: The “exclusion set” and “preference set” for each potential participant should be contained in some time interval given by the initiator.

EFR-7: The meeting initiator either asks one or more of the active participants to provide any special equipment requirements on the meeting location or the initiator himself provides those equipments.

EFR-8: Initiator asks important participants to provide and special location they prefer. However, if the “important participants” have no location preference for the meeting or there is a conflict of preferred location provided by the important participants, the meeting initiator selects the meeting location himself.

EFR-9: A proposed meeting date by the meeting scheduler should belong to the stated date range and to none of the exclusion sets.
EFR-10: A “date conflict” can be defined either as “strong” or “weak”.

EF-10.1: A “strong date conflict” occurs there is no such date that belongs to all the preferred sets and none of the exclusion sets given by the meeting attendees.

EFR-10.2: A conflict is weak when dates can be found within the date range and outside all exclusion sets, but no date can be found at the intersection of all preference sets.

EFR-11: Conflicts can be resolved by:

EFR-11.1: The initiator extends the date range.

EFR-11.2: The initiator requests some participants to remove some dates from their exclusion set.

EFR-11.3: Some participants withdraw from meeting by himself or by the initiator.

EFR-11.4: Some participants add new dates to their preference set.

EFR-12: A meeting room should be available at the selected meeting date. If there is no meeting room available for the meeting, it would be notified to the initiator and he may decide for a virtual meeting place.

EFR-13: A physical meeting room should meet the equipment requirements.

EFR-14: In case of a virtual meeting place, each and every meeting participant should meet the equipment requirements specified by the initiator or by the meeting scheduler.

6.1.2 Enterprise Non-Functional Requirements

ENFR-1: Any physical changes to the “location” and its “required equipment” shall be kept up-to-date.

ENFR-2: If any physical changes to the “location” and its “required equipments” shall occur after a “meeting proposal” and before the meeting date, the “meeting initiator” shall be notified promptly.

ENFR-3: The proposed meeting date should ideally belong to as many preference sets as possible.

ENFR-4: The proposal of a meeting date given by the meeting scheduler should be made as early as possible.
ENFR-5: Meeting room should belong to one of the locations preferred as many as possible as important participants.

ENFR-6: Conflicts should be resolved as quickly as possible.

ENFR-7: Conflicts should be resolved with no more interactions than is really needed (minimal number of interactions).

ENFR-8: The number of negotiations should be kept minimal for conflict resolution.

ENFR-9: A new round of negotiation may be required when no such room can be found.

We resolved a number of issues and came up with the requirements listed above as the enterprise domain. In these requirements, we tried to remove as many flaws as possible. Based on our improved findings of the functional and non-functional requirements we constructed the following dependency diagram for the enterprise domain.

Fig: Dependency diagram for Enterprise Requirements (Improved Understanding)
6.2 System Functional Dependency Diagram (Improved understanding)

This is our final version of the system dependency diagram. As can be seen, the diagram attempts to resolve some of the issues stated in the last section. We also incorporated some of the key terms which we previously missed due to oversight such as the possibility of a new meeting date and location, the fact that a meeting can be cancelled altogether as well as preference and exclusion sets.

Meaning of Notations Used:

[Diagram with notations and dependencies]

Fig: Dependency diagram for System Functional Requirements (Improved Understanding)
6.3 System Non-Functional Requirements

The Non-Functional requirements of the system are obtained after clearing out the various issues present in the preliminary stage. The various abstract terms like the privacy and flexibility are attained based on the priority and common sense of the developer. Here we could find the conflict resolution needs privacy, interaction should be minimal, constraints should be flexible and the date and location should be available to make the meeting convenient for the users. Generally the Non-Functional requirements are attained through the perfect implementation of the Functional requirements.

![Dependency Diagram]

**Meaning of Notations Used:**

- **x → y**: Non Functional requirements
- **x → y**: Functional requirements

**Fig:** Dependency diagram for System Functional and Non-Functional Requirements (Improved Understanding)
Screen 1: - Log In Screen

![Login Screen](image)

The purpose of this web page is to authorize the user for their username and password and provide the password tools, to change the password if forgotten.
Screen 2: - Welcome Screen

Online Meeting Scheduling System

Welcome Muaz!

New Meeting Requests:

Following are the new meeting requests, and need you need select preferred and non-preferred dates

Meeting 1: Wireless Tech Overview
Meeting 2: REG ENG Seminar

Schedule Meeting:

To schedule a new meeting press the button below.

Initiate Meeting

View Upcoming Meetings

View Meetings

Figure 2 Welcome Page

The purpose of this web page is welcome the user sign-in. After a user signs in, the system will give the user options to see new meetings requests. In new meeting requests all those meetings, which another initiator initiates and add the user as a participant. User can follow the link to the meeting to propose the timing. The user also has the option to act like an initiator and initiates the meeting. User also can see upcoming meetings and modify the dates.
Screen 3: - Initiate Meeting Screen

Initiate Meeting

Select Dates and Starting Time
Start Date: Sun Sep. 24 2006 8:00 AM
End Date: Sun Sep. 24 2006 8:00 AM
Selected Date Range:
Sep. 24 06, 8a To Sep 26 06, 4p

Add Date  Delete  Reset

Subject: [blank]
Meeting Agenda: [blank]
Location: ECS 2.201

Press Add and Remove to Select Participants

Participants
John  Bob  Chris  Angel  Casey  Mona

Add

Selected Attendees
John  Chris  Sarah

Remove

Submit  Reset

Figure 3 initiate the meeting
When the user wants to propose a meeting he uses the above page. After clicking at the imitate meeting button on the welcome screen user comes to the above page. Here he can select the date range and then the subject and agenda for the meeting and then can add potential participants. User can clear or reset the form by pressing reset and clear buttons. User can also select the room number in which the meeting will be held.

Screen 4: - Upcoming Meetings Screen

![Online Meeting Scheduling System](image)

**View Upcoming Meetings**

- Meeting 1: Wireless Tech Overview
  - View/Modify
- Meeting 2: REQ ENG Seminar
  - View/Modify

![Figure 4 View upcoming Schedule](image)

This screen will be shown after user clicks the “View Upcoming Meeting” button on the welcome screen. On this webpage user will be shown with the current meetings he is scheduled for and can make the changes to the preferred timings.
This page will be shown; when user clicks on the meeting other initiator added him as participants. User will be shown with the date range chosen by the initiator of the meeting. User has to select the day or days from the calendar date range and then add as a preferred day or an exclusion day. If user selects a day as a preferred day or exclusion day then the day cannot be picked from the calendar again.
Screen 6: - Propose Final Meeting Date Screen

This screen is for the initiator to pick the date from the union of the preferred dates given by the participants. The green color shows that there is no conflict on those days. The red color shows that the conflict occurs on those days. Initiator has to select the non conflicting date to propose as a final meeting date. If there is no such a date available then initiator has to do the conflict resolution.

Figure 6 Propose Meeting Date

This screen is for the initiator to pick the date from the union of the preferred dates given by the participants. The green color shows that there is no conflict on those days. The red color shows that the conflict occurs on those days. Initiator has to select the non conflicting date to propose as a final meeting date. If there is no such a date available then initiator has to do the conflict resolution.