

TimeScape

The solution to scheduling group meetings

Nick Hess

Computer Science
Virginia Tech
Blacksburg VA, United States
hessnt30@vt.edu

Tim Vadney

Computer Science
Virginia Tech
Blacksburg VA, United States
vtim@vt.edu

Thomas Tran

Computer Science
Virginia Tech
Blacksburg VA, United States
thomastran@vt.edu

Gio Romero

Computer Science
Virginia Tech
Blacksburg VA, United States
gioromeroruiz@vt.edu

Yasir Hassan

Computer Science
Virginia Tech
Blacksburg, VA, United States
yasirh@vt.edu

ABSTRACT

Our project idea is called TimeScape. When trying to meet up with friends or other people, it can often be difficult to determine optimal times that work for everyone. Popular existing tools merely serve as a way to block out specific time slots without giving users many options to communicate their own availability, making it difficult for project managers, club leaders, and event organizers to ascertain the necessary information.

As such, our project aims to take in the available times of all members, and visually display the times that align with the most number of people (e.g. time slot X has $\frac{3}{4}$ members free, time slot Y has $\frac{4}{4}$ members free, etc.). We aim to provide a means to easily visualize optimal time slots in an easily digestible format will make it more efficient to help arrange meetups.

1 Introduction

When scheduling team meetings, miscommunication or lack of communication can often lead to teams/groups not being aware of the best times to meet. This problem can lead to the following problems arising:

- People missing important meetings
- Deadlines being missed
- Meeting at tedious hours

Furthermore, the people who schedule these meetings are tasked with understanding everyone's availability in order to determine optimal time slots where the most people can

meet. Such a task can often be laborious, requiring a plethora of messages back and forth on different group messaging platforms—Slack, Discord, email, etc.—to keep track of and plan accordingly.

TimeScape aims to overcome these problems by implementing a web application that anyone can easily use. With its primary features aiming to serve both organizers and participants alike, the goal is to provide a seamless experience for managing and scheduling events, meetings, and gatherings.

2 Related Work

A research paper investigating the methodologies behind scheduling meetings presented its findings on the incorporation of web-based scheduling applications. Oftentimes, failures that prevent successful meetings pertain to relying on a software that does not properly “inform and remind participants about the meeting”, and the “lack of selecting a suitable time for most participants...”. Both of these failures result in wasted time and unproductive meeting results for all parties involved. Furthermore, the study shows that 46.3% of online meeting scheduling applications and its users want a way to “[generate] a convenient time for most of the participants.” 43.2% desire reminders about it through SMS and 23% desire reminders through emails. While there are many existing applications out there with some of these features, the study states that “no application has yet been created to freeze [all the problems]” users experience with these software.

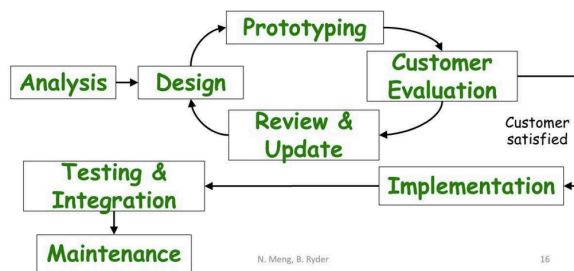
Related software engineering tools to our app idea are Google Calendar, when2meet, and Microsoft 365. What makes TimeScope unique is that we are going to improve these previous software engineering apps by designing an algorithm to determine optimal times between peoples' schedules and be able to visualize optimal times to the users when scheduling meetings with other people.

For example, websites like when2meet are not visually appealing and it can be very difficult to gain a grasp of when to meet at a certain time. Using TimeScope can facilitate this process of scheduling meetings with multiple people by providing users a smooth experience and a visually appealing UI to help determine times to meet. A user organizing a meeting can hover over different time slots on the calendar interface and TimeScope will highlight compatible time slots based on the schedules of all participants.

With mainstream calendars like Google Calendar and Microsoft 365, TimeScope will have its own calendar system that will improve upon Google Calendar and Microsoft 365 to help enable scheduling and notifications for meetings.

3 Software Engineering Process

Our team, TimeTeam, plans to use the Prototyping model, which is an iterative model. Since we likely won't get very far into implementation of our solution, we feel that the iteration of the prototyping process will best fit our team.



Visualization of Prototyping Process

The Prototyping model will help us easily change our requirements as we receive feedback from customers and users. Utilizing this constant stream of feedback, we can rapidly iterate TimeScope within a short time-frame to help develop a presentable final deliverable.

3.1 Team Management

Our team will use Kanban concepts, such as online tools via the website Trello, in order to visually display all of our tasks

that need to be completed. These concepts will help us manage and measure workflow, and limit work in progress.

We will also use key Scrum concepts such as sprints and backlog which will keep us on track to complete our goals. TimeTeam will also meet at least once weekly for a standup meeting to discuss new developments, what each member has done, and problems encountered.

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