

A Study on The Scheduling Management Based on Advertisement

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Abstract

In order to maintain, develop, manage, and control time and resource schedules for the completion of a project, policies and documentation must be established. The method of managing the timetable will monitor and control it throughout the project, which is a strategic advantage. The component of ad scheduling comes from the schedule management. Ad scheduling refers to the practice of restricting the advertising to run only on specific days of the week and periods of the day. By doing this, it is made sure that the adverts only appear on certain days or at certain hours. It is being utilized by Microsoft, Google, Facebook, and other companies. The use of schedule management for ad scheduling, as well as its uses and potential future applications, are covered in this study.

Keywords: Scheduling management, Mobile Advertisement System (MAS), Optimization method, Heuristic methodology

1. Introduction

The creation, management, and monitoring of the project schedule are all included in the schedule management plan. The project's schedule management plan provides details regarding the project's scheduling approach as well as any pertinent details concerning scheduling tools or procedures [1]. The first way of controlling a project's timetable is schedule management, seen from a management perspective. According to stakeholders, the schedule will be created, followed, and managed for the duration of the project. Understanding the project objectives, reviewing the project's work structure, choosing a schedule management approach, choosing the scheduling software, identifying the resources required to complete the

project, and finally defining the schedule and how it is monitored and controlled are all necessary steps in the creation of a schedule management plan.

Project development heavily utilizes schedule management. The project schedule is a method for communicating what work has to be done and which resources are needed to do it. The majority of the tasks involved in completing the assignment ahead of schedule is reflected in the project schedule. The project manager won't be able to talk about the expenses and resource that are crucial to completing the project without a detailed timeline [2]. The process of developing policies, methodologies, and project documentation provides instructions and direction on how the project's job schedule should be organized. The purpose of the project schedule is always to organize and remain focused as the schedule management strategy develops.

The patterns of period during which the advertising will appear are explicitly referred to as scheduling. It assists in setting up the timing slots in accordance with the advertiser's needs ensuring that the information to be conveyed will reach the target audience in the appropriate manner at the appropriate times. There are essentially three scheduling approaches for advertising. According to certain common misconceptions about advertising, when business is sluggish and the product isn't selling, promotion is necessary. The most crucial component in creating an advertising is creativity, and when comedy is used, people will be drawn to it [3]. There is a necessity for advertising in order for any given product or business to be seen.

The ethics of advertisement refers to a set of clear rules that guide the methods of communication between a vendor and a customer. The most crucial aspect of the advertising profession is ethics. An ethical commercial is one that is truthful, doesn't make exaggerated or deceptive promises, and adheres to the highest standards of decency. Today's advertisements utilize greater exaggeration and puffing. It demonstrates that the advertising is ignorant of ethical standards and ethics [4]. Finally, there are some wonderful good characteristics that support employment, self-interested decision-making, an increase in living standards, and the advancement of technology.

2. Types of Advertising Scheduling

Scheduling refers to the pattern of time where the advertisement going on. It helps to fixing up the time slots according to the advertiser so that message to be delivered will reach

the target audience in proper way and proper timings. There are three types of advertising scheduling. They are continuity, flighting, and pulsing [5].

a. Continuity

This strategy is effective for services and products whose marketing is not dependent on the season. The duration of the ads is a whole 365 days. This kind of commercial will play at regular intervals. The main advantage of this strategy is that the clients are constantly reminded of the things. This tactic helps to maintain an ongoing, thorough buying cycle. The majority of these types of advertisements are used on websites.

b. Flighting

This product model is wholly dependent on the season. Burst model is another name for this device. With this approach, the advertising will run for a very short time, and occasionally they won't run at all. All of the adverts are focused. The benefit of employing this technique is that there would be very little money wasted on advertisements because they will only be run during periods of high demand. This sort of advertising is mostly used on television and the radio.

c. Pulsing

Both continuity and flighting approaches are combined in this model. In this method, there will be advertisements throughout the entire year, but they will be on the low side, meaning that more advertisements are favored during peak hours. Therefore, this model benefits from integrating the strengths of the previous two models. The timing of advertisements is often set for a month. The different forms of pulsating are startup pulse, promotional pulse, seasonal pulse, period pulse, irregular pulse, etc.

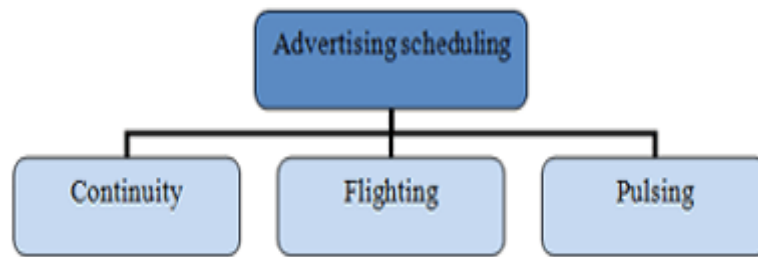


Figure 1. Types of Advertising Scheduling [5]

d. Scheduling Set-ups

Scheduling of advertisement in different websites can be obtained in the setting. By altering the settings, there will be avoiding the advertisement for a day. The top using websites are having the set ups for scheduling the advertisement as per the wish of the clients. Now, three websites for scheduling the setup of advertisement are discussed.

e. Google Ad Set-ups

The resources are utilized at the disposal to analyze the business and strategy before setting up the ad schedule. Viewing the past data on Google must come first. To activate it within the Google Ads screen, the campaign is chosen. The day and hours schedule of the advertisements is displayed after selecting the ad schedule option in the settings. Once the days and hours for the advertisement are decided, the timetable may be browsed. Once everything is finished, the advertisements can be arranged to run in the morning, pause for lunch, and then reactivate in the afternoon.

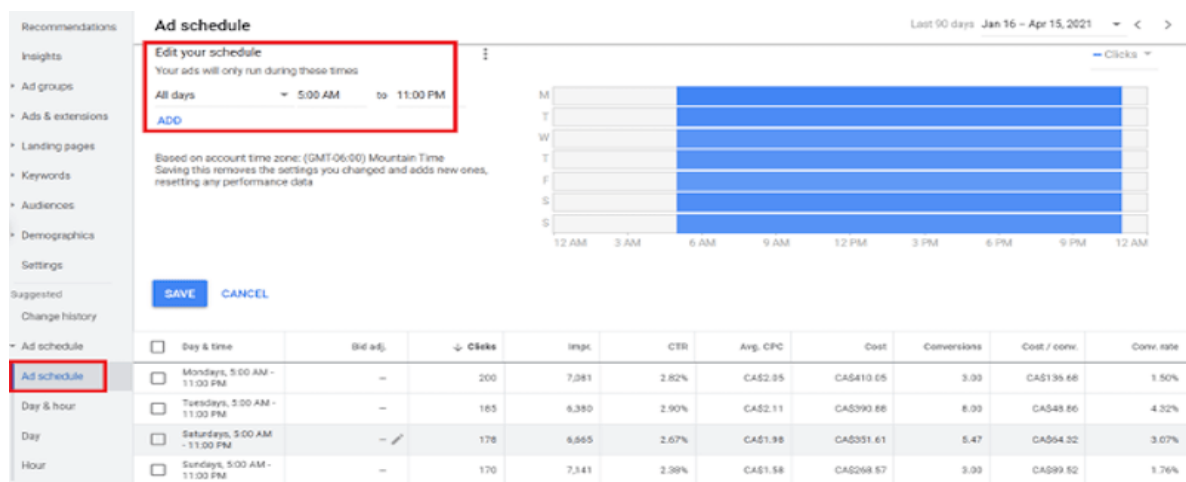


Figure 2. Google Ad Set-up [6]

f. Microsoft Ad Set-ups

Microsoft offers more scheduling freedom when compared to Google. The fact that the timezone is dynamically adjusted gives Microsoft Ad Schedules a significant edge over Google Ad Schedules. Microsoft Auto Import may automatically handle the ad schedule between the platforms by copying the Google Ads module over to Microsoft. Microsoft offers two options for modifying the ad scheduling. The Google Ad setup and the Microsoft Ad scheduling setup are practically the same. As previously indicated, Microsoft will automatically alter the days and hours of the ads after the ad scheduling setup.

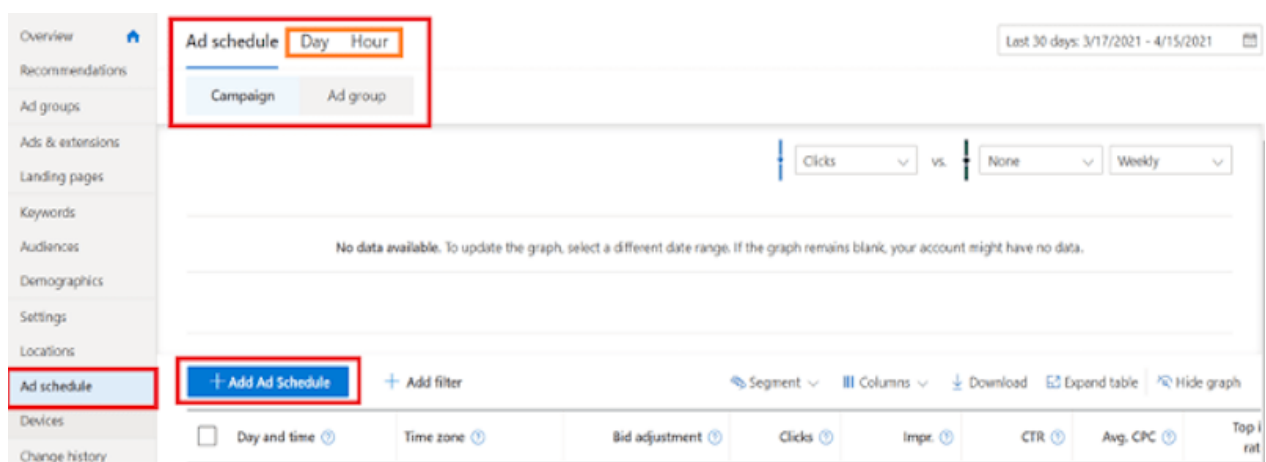


Figure 3. Microsoft Ad Set-up [6]

g. Facebook Ad Set-ups

Facebook ad scheduling has comparable spend-restricting characteristics to Google and Microsoft. It is, however, only an option when using a lifetime budget rather than a daily budget. Simply selecting "display more choices" after setting up the Facebook campaign's ad plan will reveal the budgets and schedule area for the ad set editor. Choose the days and times that are displayed on the schedule, just the same as Google and Microsoft.

[Hide Options](#) ▾

Ad Scheduling

☒ Run ads on a schedule

Use viewer's time zone ▾

We'll schedule your ads based on the time zone of the person seeing it.
For example, if you select 8am to 5pm, we'll only show your ads to people from 8am to 5pm in their local time.

	12am	3am	6am	9am	12pm	3pm	6pm	9pm
Monday								
Tuesday								
Wednesday								
Thursday								
Friday								
Saturday								
Sunday								
Every Day								

■ Scheduled hours

Figure 4. Facebook Ad Set-up [6]

3. Literature Survey

The perceived intrusiveness, confidentiality issues, and annoyance were identified in research [7]'s analysis as the factors that influence people's decision to avoid advertisements on mobile social media. Advertising's clear involvement in the privacy issues include customization and personalisation. The social engagement will make the privacy worry worse. Due to the unrelated commercial, women had a low perception of the utility of advertising in general. It was discovered that this had an impact on the link between annoyance and advertisement avoidance. Combining experimental research with field investigations in the future to study advertisement avoidance may improve the results' validity and produce useful information.

To distribute the advertising message in a methodical and efficient manner, YoungSuk Kim et al. [8] created the Mobile Advertisement System (MAS) using push scheduling technique. The push advertisement schedule technique enables a system to choose ad material based on consistent criteria subject to content category and directed by user preference model. The designers of the suggested system used mobile applications to improve user experience and enable push-based advertising scenarios via mobile networks, reducing the possibility of spamming consumers using client-side message filtering. The upcoming work will concentrate on the classification system for content categories and metric analysis of advertising.

Meenu Singh et al. [9] proposed that numerous factors, including the broadcast network and the advertiser, be taken into account while scheduling television commercials, by employing a single-objective or multiple-objective optimization model to schedule the advertisement. The highest customer rating, the lowest cost, or a trade-off between both the two, might be the goals when taking the television network model into account. To answer the medium and big issues, local research techniques as well as stimulated annealing methodologies are described. Study on the dynamical and stochastic approaches to the issue will be done in the future.

Kim, Gwang, et al. [10], stated that the most prevalent type of web advertising that attracts internet consumers' attention is the online banner advertisement. In the suggested approach, an integer linear programming model with a non-linear objective function was included. Two heuristics and a meta-heuristic algorithm were also obtained as solution techniques. The parameters' values were dynamically updated and displayed inside the models over time. Even if the suggested heuristic technique is effective and incorporates integer programming, which represents an NP-hard issue, in order to complete the non-linear model successfully for future study, various strategies like linearization methodologies or meta-heuristics will be used.

A comprehensive technique to identify the ad network that generates the maximum return for the publisher app at the instance level according to the characteristics of both the advertising and the ad network was provided in article [11]. It is possible to test the suggested solution and ensure its viability in the real world by interviewing and surveying a selection of accomplished mobile app publishers. The click patterns of mobile app users, estimates of the efficacy of the ad network, the effectiveness of the advertisements, and also the click-through rate help to choose the most profitable ad network for the publisher. Selecting the top-performing ad network that offers the greatest user click rate will be used to leverage various contributions.

Table 1. Summary of Related Works

Xiaolong Wei et al. [7]	Advertising benefited greatly from customisation and personalization. The perceived intrusiveness was judged to be less with personalization and more with customisation. A significant impact of annoyance is avoiding advertising is connected to perceptions of invasion of privacy.
YoungSuk Kim et al. [8]	Push scheduling and MAS are offered here to distribute advertising messages in a methodical and efficient manner. A system can choose ad content using the push advertisements scheduling technique while being directed by the user preference model.
Meenu Singh et al. [9]	Both multi-objective or single-objective optimization models are taken into account for ad scheduling. The model maximises reach while minimising expense of advertising when seen from the viewpoint of the advertiser. There are several tools and techniques for making decisions that will result in the best optimal scheduling of the adverts.
Gwang Kim et al. [10]	Recent studies on the timing of internet banner advertisements put the emphasis on increasing advertising effectiveness rather than space utilisation. This study suggests four variables—exposure, participation, size, and competition—that affect consumers' propensity to click online advertisements, or CTR.
Shalinda Adikari [11]	Here, a solution was created for the mobile app advertisement application that improves performance and boosts publisher income. The suggestion from an automatic and adaptable ad network is the first contribution to this study. The second suggestion is the app instance level solution. The proposed model will only choose ad networks, which is the third contribution. The last contribution is that the suggested strategy optimises the income for mobile app creators.

4. Advertisement Scheduling

Everywhere, there are planned advertisements advertising the publisher's items. A brief video or image-based commercial is accessible by accessing the various programmes on mobile devices or desktops. The varied things that are displayed will draw clients' attention and encourage them to make purchases. There may be some more forms of advertising that are irrelevant to the website. Customers can avoid certain kinds of advertisements. Figure 5 shows that the advertisement will be published by marketing the advertiser's business, creating a product, and making them available for viewing on the internet. Another group of persons,

known as web-publishers, are able to display advertisements from advertisers on their websites [12]. Clients or viewers view the advertisements and approach to purchase. The online publisher might be asked by the advertiser to schedule the ads for a certain amount of time. This may continue for the duration of time.

Because of this, the advertising can be seen up to the time when people access the website. Every website, as well as every mobile application, uses this technique. Like Instagram, Facebook, YouTube, and other platforms use a similar strategy to profit from various advertisers. Scheduling the various advertisements from the sponsors is the main focus of service time. Each advertising will thus run for up to 60 seconds. Some advertisements have a 2-minute runtime and offer the choice to skip or ignore them. Therefore, watching it for a long period would be a waste of time.

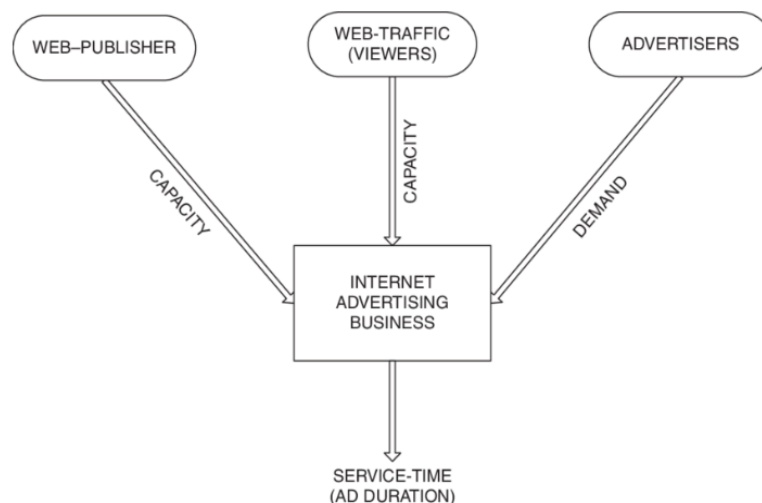


Figure 5. Online Advertising Management [12]

a. Drawbacks of Advertisement Schedule

- The items are published by the marketers on various websites, which generates revenue for the advertisers. Therefore, when customers examine items and choose to purchase them, it implies that advertisers will price the products highly and deliver them to customers, adding a cost to the products for advertising expenses.

- Advertising is similar to people daydreaming. It transports individuals from reality into the world of artificiality. As a result, it is regarded as a social evil and is referred to as undermining societal ideals.
- Pictures that are offensive are utilised to draw in a specific demographic. Social values deteriorate as a result of it.

Therefore, it is necessary to eliminate these flaws and plan advertisements that satisfy customers. Ads that run continuously and repeatedly must be planned. One of the nicest parts of scheduling the advertisement according to the thoughts of viewers is feedback gathering.

5. Conclusion

This study has shown that scheduling tasks so that they don't interfere with one another is the key to effective schedule management. It is mostly utilized in project management. Proper models may be employed to market the items at the appropriate times, by including this strategy into the advertisement plan. Additionally, extraneous advertising that is neither helpful nor beneficial will be avoided. This study discusses the pertinent reviews of managing of the advertisement schedule, its types, and schedule changes of the advertisements.

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