

# Framework of Marketing or Newsletter Sender Reputation System (FMNSRS)

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**Abstract**—Nowadays, the use of the advertising emails is widely used in commercials. Often advertising emails are sent to unwanted recipients that might be from not up-to-date recipient list. Such events can lead to boredom and annoyance to the recipients. As the consequences, the recipients might permanently deny to accept these emails or even worse the email owner business or product image could be damaged. Therefore, we propose Framework of Marketing or Newsletter Sender Reputation System (FMNSRS) by using sender reputation algorithm based on the centralized user feedback database to solve the problems previously mentioned. The FMNSRS can create the centralized lists of both the marketing and newsletter senders and the recipients. These lists are periodically updated. In addition, we use the sender reputation system to calculate the score of each sender by several feedback from the clients to classify senders in order for the recipients can choose to receive advertising emails from the high reputation score senders. For the framework validation, the results show that the FMNSRS can improve the sending capability of the marketing or newsletter email systems. Also, the FMNSRS can accurately detect the marketing or newsletter emails approximately 73.30% more than the traditional framework.

**Keywords**-email; reputation system; spam detection; marketing email; newsletter email

## I. INTRODUCTION

At present, the number of Internet users have been increasing dramatically which enables the emails to be an efficient customer communication method in our daily life. In addition, the email gain the advantage in lower cost and faster than the other communication methods. The recipients and senders can also send and access the information anywhere and anytime via the Internet. Because of its popularity, almost all businesses use the email method to send their information to customers for various objectives, such as advertising, purchase orders, sales, and customer care service. However, the problem of unsolicited email, commonly known as email spam, is an important issue to face.

An email spam is an email sent indiscriminately, indirectly or directly, to the unwanted recipients by the senders having no current relationship with the recipients. As a consequence, most recipients are flooded with both welcome

and unwelcome emails. Such event affects recipient to work efficiently. Furthermore, the recipients may be harmed by the attackers. As with an email spam, the use of the advertising emails, marketing or newsletter emails, violates the rights of the recipients that causes the critical problems as follows.

- 1) If the advertising emails are sent randomly to unwanted recipients that might be from not up-to-date recipient lists, it lead to boredom and annoyance to the recipients.
- 2) If the recipients receive unwanted email frequently, the recipients might permanently deny to accept these emails or even worse the email owner business or products image will be damaged.
- 3) It consumes disk storage space, computational resources and network bandwidth of the recipient email systems.

Although the rule of sending the marketing or newsletter email will be indicated in the CAN-SPAM that it has to be sent to only the intended recipients. The recipients can subscribe and unsubscribe or use the email filtering system to identify the spam emails. However, this rule is unsatisfied the needs of the recipients as well as it should. Additionally, it may be too late to solve these problems which the recipients already have the negative attitude. This result is quite serious in business. In this paper, we propose the system reliability of the marketing or newsletter email called as Framework of Marketing or Newsletter Sender Reputation System (FMNSRS). A FMNSRS uses sender reputation algorithm based on the centralized user feedback database to solve the problems previously mentioned. First, The FMNSRS creates the centralized lists of both the marketing and newsletter senders and the recipients in which these lists are periodically updated. Then the sender reputation system can calculate the score of senders by feedback from clients to classify both wanted and unwanted senders. The wanted senders have a higher reputation score that the recipients can choose to receive the advertising email from this the high reputation score senders.

In the next section, we discuss the background informa-