

## Defining and Testing Email Filter Rules Before Adoption

**Team(s)** Loki (Centre Inria de l'Université de Lille & CRISTAL)

**Level** Master

**Duration** 4-6 months

**Advisor(s)** Bruno Fruchard [Contact advisor(s)]

This internship focuses on end-user development of email filtering rules (e.g., coloring an email in red if it comes from a specific sender). The goal is to (1) identify methods to quickly define rules, (2) test the effect of these rules, (3) evaluate benefits of each method in a user study.

### Context

We use emails regularly to exchange information with colleagues or reach out to people we do not directly know. We receive a few to many emails a day, some important and some useless. Parsing them and understanding their content takes time and effort, and interrupts us from other tasks.

While being used everyday, email clients still lack automation features [1]. Applications like Apple Mail or MS Outlook provide some automation using rules (Figure 1), but end-users must be aware of them, navigate to the right menus to create them, and know how to configure them.

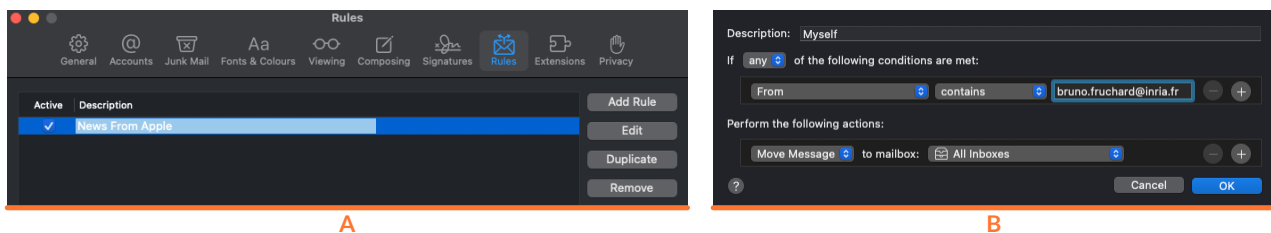


Figure 1: Email rules in Apple Mail: (A) panel summarizing all created rules, (B) window to create a rule

We want to increase awareness of these rules and facilitate their design by studying novel interaction means. For instance, we want to:

- investigate if pre-filled rules ("highlight in orange emails from this@domain.com") induce end-users to adopt them;
- support end-users to modify these rules quickly upon receiving emails to match (or mark as exceptions) new cases;
- visualize the outcomes of a new filtering rule before applying it and making lasting changes.

### Objectives

Our goals are to increase awareness of filtering rules, support their creation, and facilitate testing them in a mail client without making everlasting changes.

The candidate will:

1. design interaction patterns to facilitate the creation of filtering rules by making end-users more aware of their existence and facilitate their creations

2. build an interactive extensions to the **Zimbra webmail** client to integrate interaction means enabling filtering emails and testing the outcomes of filters before adopting them
3. run a user study to compare the benefits of different patterns on the adoption of filters and their modifications on the long term when new cases emerge (e.g., a filter used to mark emails on a certain topic must now include new senders)

### Candidate

The candidate must be at the MSc (Master 2 in France) level and show interest in Human-Computer Interaction and demonstrate knowledge in Interaction Design, and Computer Science (particularly programming). Previous experience in designing interaction techniques and web extensions are a plus.

If you are interested, please send an email to Bruno Fruchard ([bruno.fruchard@inria.fr](mailto:bruno.fruchard@inria.fr)) using as a subject [LOKI internship: Defining and testing email filter rules before adoption].

### References

- [1] S. Park, A. X. Zhang, L. S. Murray, and D. R. Karger. Opportunities for automating email processing: a need-finding study. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*, CHI '19, pages 1–12, Glasgow, Scotland UK. Association for Computing Machinery, 2019. DOI: [10.1145/3290605.3300604](https://doi.org/10.1145/3290605.3300604).