

Look Ma, No Email! Blogs and IRC as Primary and Preferred Communication Tools in a Distributed Firm

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ABSTRACT

Email has been the primary communication medium in organizations for decades and despite studies that demonstrate its obvious disadvantages, the prevailing thinking is that email is irreplaceable. In this paper I challenge that view through a field study of a distributed firm that is highly successful in developing and delivering products without regular use of email in the workplace. Group blogging and IRC were the primary tools used and they allowed improved coordination and knowledge sharing compared to email. This paper contributes to scant literature in CSCW on firm-level technology use.

Author Keywords

Email, Blogs, Media Use, Virtual Teams, Distributed Work.

ACM Classification Keywords

H.4.3 [Information Systems]: Information Systems Applications---Communications Applications

General Terms

Design, Human Factors, Management

INTRODUCTION

For almost two decades email has been the undisputed champion of organizational communication both in terms of number of users and applicability [5, 7]. Email allows participants freedom from constraints of time and space, it can be put to strikingly different uses, and, technically, it operation is highly simple [7]. Yet, the extensive reliance on email has led to numerous problems, studied extensively by CSCW researchers. Workers have difficulties coping with the high number of messages – email overload [2, 4], and email is often only indirectly useful for the actual task at hand [7]. These problems are exacerbated in distributed organizations as there is greater reliance on technology for communication. Although email has remained unchanged

since its inception, an emerging trend is the increase in alternatives available for communication in the workplace – the development of communication ecology [6]. These alternatives include instant messaging, wikis, social networking, blogging, micro-blogging, and desktop videoconferencing (e.g. [6, 8]). In spite of their popularity, these alternatives still strictly function as support for email use and their access is often restricted to a few members of the organization. We still do not know if organizations can communicate effectively without email as the primary medium and if they can do it at a sustained level. To truly avoid problems that emerge from email use and to develop better work practices, this shift might be essential, particularly for distributed organizations. In this paper, I present a study of an organization – RAPID (a pseudonym) – that has been able to develop an ecosystem where email is not the primary or preferred medium with excellent results for both its employees and its bottom line. The study was undertaken with the explicit aim to 1) establish that email was not the primary medium, and 2) understand how the ecology functioned.

RESEARCH STUDY

RAPID is a small firm with around 50 full-time employees and 5-10 contractors and develops software products including one of the most popular blogging software on the web. It is headquartered on the U.S. West Coast but most employees are distributed. The study was initiated through Tom, a top manager of the company, who was contacted after I read a blog post he had written on why firms should be distributed. The post highlighted the reliance of RAPID on blogs and IRC, with negligible use of email. I contacted Tom and requested the firm's participation on a study of distributed teams. Tom responded that if the employees of the firm volunteered, I can go ahead with the study. He forwarded my request within the firm and a small sample of workers (N=5) agreed to be interviewed and a larger sample (N=26) responded to my survey. I was also able to draw on publicly available data about the firm and its practices. Tom also provided me with examples – screen shots – of technology use within the firm and guided me to their public blogs so that I could get a flavor for their practices.

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FINDINGS

Interviews

I interviewed five informants and all interviews, except one, were conducted via Skype and audio recorded. Copious notes were taken during the interviews which lasted around an hour. The sample was diverse (see Table 1) in terms of function, location, and gender. The interviews consisted of a series of open-ended questions about informants' background, tenure with RAPID, nature of work, team composition, use of technology, and collaborative experiences.

Informant	Position, Location, Preferred Media
Brian	Support/Designer, Central U.S., Blogs, IRC
Alan	Designer/Developer, Central U.S., Blogs, IRC
Sarah	Admin, U.S. West Coast, Email, Blogs
Janet	Editor, U.S. East Coast, Blogs, Email
Michael	Support/Developer, Europe, IRC, Blogs

Table 1: Profile of interview informants

Blogs

All respondents identified blogs as one of their primary communication media – blogs were the first or second choice for all informants. Blogs were used as part of project work and Alan referred to them as his “second skin.” Brian stated that his primary communication tool was the internal blog that allowed for group blogging and was updated in real time. This was the primary asynchronous way to get information and he used these in preference to email. Blogs were used for sharing code and were integral to development efforts. Overall, given the large number of internal blogs informants reported that they read their group blog, a few organization-wide blogs, and a few blogs in which they were keenly interested.

Internet Relay Chat (IRC)

Informants who were in development, design, or support roles mentioned that IRC was the second most popular tool for team communication. IRC channels were logged and used for real time synchronous communication, as opposed to blogs which were used primarily for asynchronous interaction although they were updated frequently. IRC was not popular among admin or editorial staff; Janet, an editor, commented, “I hardly use it. Developers use it quite a bit, quickly to get a problem solved.” Michael, who was primarily a support person but also did some development, commented that his team was mostly in IRC rooms and for one-on-one they used Skype.

Skype, Email and Instant Messaging (IM)

One informant, Sarah, who had an administrative role, said that she followed internal blogs and even blogged herself but used email for communication as her communication was of a private nature having to do with coworkers'

payroll and benefit issues. Janet said that she used Skype for one-to-one (audio calls) and email a lot less than everything else, “email is the lowest on the list.” She said she also used Jabber, an Instant Messaging client, for quick updates on recent activity on blogs. Brian said that, “We use email very very low,” and primarily to set alerts to notify us of something that's posted on the blogs. Skype was his preferred back channel of communication and all real time communication happened on IRC. Alan explained that when he joined RAPID he was a contractor and only had access to Skype, which was not as powerful as blogs and IRC. Alan further mentioned that even if they used Skype for communication, the communication was recapped on the internal blog. He said that he did not like email digests and emails were used primarily as notification service. Instant Messengers were used similarly, to subscribe to blog notifications.

The interviews helped in establishing the use of blogs and IRC as primary tools except for admin roles and also brought up other important aspects of communication. For instance, Alan pointed out that, “We don't really have meetings; we have informal chat sessions when we need them.” There were no scheduled meetings within the teams. The only scheduled meetings were biannual face-to-face meet-ups for the entire company but informants commented that they were able to work fine even before they met their coworkers. One informant suggested that the face-to-face meet-ups were important but not very social as most developers were quite introvert. Sarah said that as part of her duties she also maintained the company calendar that listed who was where and said she had realized that there was a greater need to communicate at RAPID compared to her face-to-face work experience. She added, “I've learned to be clear, to express exactly what I mean; how to correct errors in my blogs; to deal with people from different countries; especially in the meet-ups; and, follow-ups are really important.” Michael, whose team was spread across time zones, remarked that he found blogs and IRC invaluable to reduce response time and to document what they had been doing. He added that you had to be self-driven and believe in a common goal of making the firm's product offerings better. Informants also said that RAPID's work practices were clearly stated to all newcomers and were even posted on the job page of the website. Furthermore, employees were first hired as contractors so that they could test the waters and their managers could ensure their work effectiveness in a virtual company. To acclimatize newcomers, they were given support roles so that they understood the product and the market better.

Survey Results

Interviews established that blogs and IRC were popular tools and next I wanted to identify how prevalent their use was across RAPID. Use of blogs and IRC within software organizations is new, but their use as primary and preferred tools across a firm is undocumented. A survey was developed based on interview notes and administered using

RAPID's own survey design software to maximize participation. The survey received 26 responses (response rate of 45%). Of the 10 questions on the survey, 3 related to demographics, 3 questions asked about media use, on which I report here, and the rest inquired about respondents' satisfaction with the firm and their performance in the firm.

Frequency of use

The first question about use of media asked respondents the frequency of use of four communication technologies referred to in the interviews: Blogs, IRC, Skype and Email (see Figure 1). Blogs were the most frequently used, followed closely by IRC. Email was least frequently used and some respondents used it only on a weekly basis. 84% used blogs and 70% user IRC hourly or few times a day.

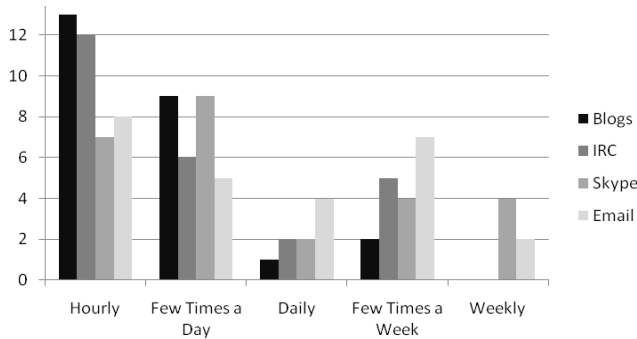


Figure 1: Frequency of use.

Usefulness of media

The next item (Figure 2) related to media use asked respondents how useful they found each of the four tools for work. Blogs, once again, were reported as the most useful (65%) followed closely by IRC (50%). Skype was also reported as useful by a majority of respondents and only 11% found email extremely useful for work. The findings confirmed interview data around media use both in terms of frequency and usefulness.

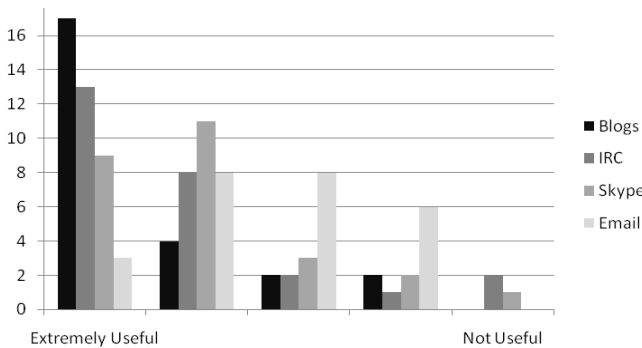


Figure 2: Usefulness of media.

Media preference

In addition to frequency of use and usefulness, the final item (Figure 3) asked respondents their personal preference for each medium over other media ("I prefer ___ over other technologies"). Blogs and IRC, once again, were by far the

most preferred communication tools with IRC garnering stronger affiliation by some respondents even compared to blogs. Email was the least preferred communication tool as compared to the other options available to workers.

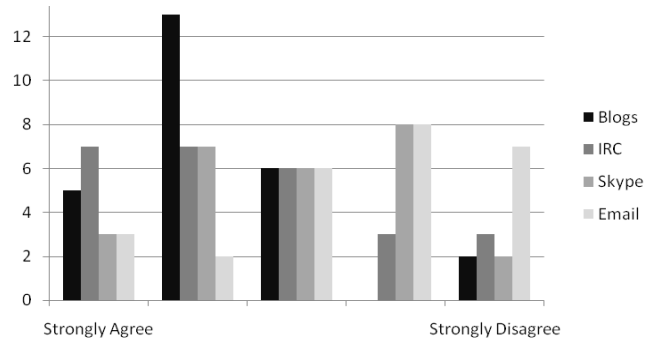


Figure 3: Media preference (Q: I prefer ___ over other media).

The data show that blogs were the most frequently used, most useful, and preferred medium for workplace communication. They were used primarily asynchronously but were becoming useful as semi-synchronous medium through group blogging. In the interviews informants mentioned monitoring 7-8 blogs regularly. Blogs also served as placeholders for ideas that could not be acted on immediately. IRC was the second most used, useful and preferred medium for communication and was used for synchronous communication but was also archived. The developers in particular were frequent users of IRC.



Figure 4: Blog theme used at RAPID for internal blogs.

Through interviews and analysis of secondary data, such as blog posts, I established that the use of blogs at RAPID was gradual and required some innovations. Initially, IRC, in combination with Skype and email was the preferred communication tool. IRC allowed searchable logs and automated tools that published things like code commit notices into the chat stream. As the team size grew, IRC got too busy and multiple channels had to be implemented. Blogs were the next reincarnation of this concept, particularly with the development of real-time group blogging. The blogs provide an activity stream for every project and IRC channels are used for real-time group chat. Skype and email are used only when necessary for one-on-one communication and mostly for private messages. The push behind blogging is to archive and make accessible information to everyone in the company. Critical to the use

of blogs was a feature that allowed posting on a blog page to give it a Twitter like feel was added. Still a problem remained. This system was useful for status updates but not for conversation. A final feature that allowed threaded conversation under blog posts proved to be the ideal design feature averaging 20 posts per day for each blog. As one designer commented, “Seemingly simple changes have increased engagement many-fold.” Alan commented, “What really helps us is an abundance of blogs, they act as conduits of what other people are doing. I twitter constantly and I blog.” The transformation of blogging into a group-based activity supported by a novel blog theme was a critical step in this process. A caveat when interpreting these findings: non-email work flow might be easier to implement in new firms but hard to implement in older, and larger, firms, through substitution. It is likely that this approach will work better in software development as the coordination requirements are higher but are also easily represented in the code [1]. Blogs together with IRC allowed both synchronous and asynchronous coordination and easy monitoring of the dynamic development environment; products at RAPID sometime underwent as many as 20 commits to the production code.

DISCUSSION AND CONCLUSION

Ducheneaut and Watts [3] identified three metaphors for email research: email as file cabinet, email as a production facility, and, email as a communication genre, and argued that email research had failed to connect the three levels, which align with the individual, communicative, and socio-organizational. At RAPID the three levels were connected through a combination of blogs and IRC, substituting email use but with variation among users based on their work function. Developers relied heavily on IRC and Blogs whereas those in administrative roles relied significantly on email for communication, often because of privacy issues. The closeness of ties between workers in similar roles also helped diffusion of communication practices. Overall, this study reinforces the view that the use of technology for communication is driven largely by social norms which support the appropriation of innovations within the fabric of existing work practices. The organic growth of RAPID necessitated experimenting with communication media and their development of blogs made it easy to have a blog based infrastructure. The use of blogs improved communication which in turn improved their product offering.

RAPID founders believed in organic decision making and wanted to make their organization as transparent as possible. They realized that email prevented an open environment with negative long term implications for knowledge sharing and learning [5]. Therefore, they set out to create a non-email environment and interviews data suggest that they were quite successful in this goal, as one informant commented, “I learn something new every day. You’ve all this technical knowledge available to you. Even

though we are spread around the world we are communicating with each other through blogs and IRC. In a physical office you might put something on your pin board but you’ll never get the feedback from 60 people [through blog monitoring and comments].”

Although the title of this paper is a little cheeky – RAPID workers did use some email – email use was a small and insignificant part of the communication ecology and it was certainly not a preferred option. Findings from this study suggest that given email’s ubiquity, we might place a disproportionate confidence in its utility. The exponential use of text messages and social networking tools for communication in the personal and professional space signal that we might be entering a new era of communication where reliance on email might taper off significantly. A primary lesson from this study is that shift in communicative practices to minimize email use can be a more productive option if firms implement it from the start.

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