# UCLA
## UCLA Previously Published Works

**Title**
WFPI virtual communications centre: a hive of e-mail activity

**Permalink**
https://escholarship.org/uc/item/6066p6sd

**Journal**
Pediatric Radiology, 44(6)

**ISSN**
0301-0449

**Authors**
Andronikou, Savvas
Dehaye, Amanda
Boechat, Maria Ines

**Publication Date**
2014-06-01

**DOI**
10.1007/s00247-014-2977-1

Peer reviewed

# WFPI virtual communications centre: a hive of e-mail activity

Savvas Andronikou · Amanda Dehaye ·
Maria Ines Boechat

The World Federation of Pediatric Imaging (WFPI) functions in a virtual space spanning six continents to coordinate activities for its worldwide membership. A distance of 9,400 km and a time difference of 9 h separate the current president, who resides in Los Angeles (USA), and the general manager, who lives in southwest France.

The organization communicates with its members via its Web site and newsletters distributed by mail which, like its founding societies, affords it a virtual presence and provides an extension to enable the society to exert greater influence [1].

Communication among council (board) members is spontaneous and interactive. Yet some council members rarely find themselves in the same room together, and the council as a whole is never in the same place at the same time. Because there is no budget allocated for flying council members to meeting locations, verbally interactive communications are largely limited to Skype and electronic meetings using GoToMeeting© software (www.gotomeeting.com; Citrix Online, Santa Clara, CA). The biannual council meetings are partially attended online, with no face-to-face interaction because webcams overload the software. This type of communication among council members, who speak nine different languages, takes place with significant time delays, and large Web-based meetings require expert time-

engineering for all to attend. The council's membership secretary in Australia regularly attends meetings at 1 a.m. local time the following day. So, while the WFPI prides itself on the reach of its education and outreach, as well as the diversity of its members, it is a surprise that more things don't get lost in translation.

Needless to say, the majority of business communications are conducted via e-mail. E-mail is considered "the most important mechanism introduced for developing interpersonal relationships since the telephone" and it is the most widely used form of computer mediated communication developed to date [2]. The central communication hub of the WFPI is the general manager's office. The general manager acts as the main communication portal, channelling the information back into council/committee support (background briefings, ghosting). The manager also maintains the tempo when projects start flagging and generates visibility/accountability tools, drawing on the archives (Web site, newsletters, donor reports).

The archives kept by the WFPI office provide an excellent opportunity to generate important data by quantifying communications using a categorisation system to shed light on the areas of most activity. Previous medical-related research using information elicited through analysis of e-mail collected these data based on message volume, frequency and length of messages, response time and content [2]. Because of current staffing limitations and the sensitive nature of some e-mails, we determined the volume of e-mail since the WFPI's start-up and devised content categories according to their nature. The goal was to quantify and categorise e-mail communications relevant to WFPI activity from start-up to date by examining the WFPI e-mail archives preserved by the WFPI general manager.

## Methods

The WFPI general manager's e-mail address, which receives mail directly or via being copied on the vast majority of WFPI

S. Andronikou (✉)
Department of Radiology, Faculty of Health Sciences,
University of the Witwatersrand Medical School,
York Rd, Parktown, Johannesburg 2193, South Africa
e-mail: docsav@mweb.co.za

A. Dehaye
World Federation of Pediatric Imaging, Reston, VA, USA

M. I. Boechat
Council of Directors, World Federation of Pediatric Imaging,
Department of Radiological Sciences, Department of Pediatrics,
David Geffen School of Medicine, University of California,
Los Angeles, Los Angeles, CA, USA

business matters, underwent quantitative analysis by category and subcategory to determine the number of e-mail communications overall and per category. Subcategories of especially high activity (≥50) were further evaluated subjectively by the general manager to determine perceived reasons for this. The WFPI archive records any event of significance within WFPI, be it council turnover, membership development, project news and output, visibility tool launches/updates, reports issued or funds raised.

E-mails were categorized as follows, in alphabetical order:

1)  Administration,
2)  Child imaging safety,
3)  Education,
4)  Equipment,
5)  Funding,
6)  Governance,
7)  Cornerstone institutional documents,
8)  International advocacy,
9)  Member organisations,
10) Outreach,
11) Research and
12) Society meetings entailing WFPI involvement with

    a.  Technicians,
    b.  Telecommunications,
    c.  Visibility,
    d.  Volunteers and
    e.  Web site.

## Results

The total number of recorded e-mail communications for the period January 2012–January 2014 was 4,045, an average of 169 per month, although the median demonstrates increasing flows of traffic per month as the WFPI's trajectory rises. In descending order of activity, these were archived under the following categories: 940 (23%) outreach, 430 (11%) member organisations, 405 (10%) society meetings involving the WFPI, 398 (10%) education, 282 (7%) funding, 270 (7%) governance, 249 (6%) international advocacy, 236 (6%) cornerstone institutional documents, 226 (6%) administration, 178 (4%) telecommunications, 164 (4%) child imaging safety, 131 (3%) Web site, 104 (3%) volunteers, 22 (<1%) research, 5 (<1%) technicians, 3 (<1%) equipment and 2 (<1%) visibility.

Sub-categories with >50 e-mail communications

*Administration* Columbia University Public Health project, 59 (1%). This is considered useful to secure external input into organizational development but some recommendations are not viable at this time.

*Child imaging safety* General, 61 (4%). This traffic reflects institutional steering (aims, committee framework/members). It is expected to increase as collaboration with the Image Gently campaign gains momentum.

## Education

•  General, 82 (2%). Traffic reflects institutional steering (aims, committee framework/members). It is expected to increase when WFPI education finds its niche.
•  Haiti, American College of Radiology (ACR), 57 (1%). This is for a successful course establishing good relations with the ACR.
•  *Pediatric Radiology* journal minisymposium, 53 (1%). This is an underestimated value because the sub-editor was the communication center for commissioning and editing drafts.

## Funding

•  Sidra medical centre Qatar, 65 (2%). This has been unfruitful traffic to date, but it has prompted the formulation of WFPI's on-line video library plans.
•  Research and Education (R&E) Foundation, 64 (2%). A grant of $50,000 (U.S.) was accorded.

*Governance* Incorporation questionnaire, 51 (1%). This included WFPI Executive Committee brainstorming on the highly sensitive issue of incorporation country and management services prior to presentation to the full council. It aimed to set up a smooth and transparent process (high traffic) to enable the council to reach an informed and comfortable conclusion (low traffic).

*Key documents/institutional cornerstones* Bylaws, 158 (4%). This was a major effort to draw up bylaws at the organization's inception; the bylaws have by and large proved robust.

*International advocacy* International Society of Radiology (ISR) 2014 meeting, 55 (1%). This traffic reflects the challenge of positioning WFPI with regard to the ISR.

## Member organisations

•  Indian Society of Paediatric Radiology (ISPR), 76 (2%). This includes regular updates for ISPR profile page and diverse administrative issues.
•  African Society of Paediatric Imaging (AfSPI), 51 (1%). This includes the formation of the AfSPI driven by WFPI.

- European Society of Paediatric Radiology (ESPR), 110 (3%). This traffic is reflective of more complex communication patterns and fluctuating WFPI engagement in Europe. It excludes e-mails on funding and council nominations.

*Outreach*

- General, 55 (1%). Traffic reflects institutional steering (aims, committee framework/members, reporting tools, data collection).
- Indira Gandhi Institute of Child's Health, India, 166 (4%). Traffic is currently outstripping project performance: this reflects difficulties with project set-up, including the installation of a new digital reporting platform.
- Khayelitsha Hospital, South Africa, 72 (2%). This figure does not include tele-reporting traffic (recorded through the project administrator). Prolific traffic has been balanced by concrete results.
- Liberia, 85 (2%). This reflects unfruitful traffic because the project did not materialize. It includes communications with an African tele-medicine platform set up by Geneva University that might still serve a purpose.
- Tuberculosis, 85 (2%). Traffic reflects the formation of the Children's Imaging for TB group (CHIT) and the issue of successful tuberculosis educational videos.
- Volume sweep ultrasound, 119 (3%). Traffic reflects substantial preparatory efforts and protocol preparation (participants in Los Angeles, Washington, DC, and South Africa). Project is now underway in South Africa.
- World Health Organization (WHO) pneumonia meeting, 91 (2%). High traffic is reflected here because two WFPI representatives participated in an important WHO meeting to set new standards for imaging. Includes council approval of meeting representation (a new role for staff) and attendance costs (reflecting WFPI's caution with expenditures while its revenues are low; it also reflects the need for streamlined approval procedures).

*Society meetings* Radiological Society of North America (RSNA) 2012, 71(2%); the Society for Pediatric Radiology (SPR) 2013, 68 (2%). WFPI meetings were staged at both RSNA 2012 and SPR 2013.

*Telecommunications* SUSTSOL tele-reading platform (SUST SOL GmgH Sustainable IT Solutions, Frohnleiten, Austria) 155 (4%). Traffic covers platform selection and is uncomfortably high for solving technical difficulties on both sides. Is this unavoidable when developing new software?

*Web site* Web site conversion, December 2013, 64 (2%). Traffic reflects a manual migration supported by a U.S. design

company along with staff from the Society for Pediatric Radiology and the American College of Radiology.

## Discussion

Research by the Society for Pediatric Radiology defines a virtual organization as the digital representation of the information and services of the physical organization [1]. Still in early development and with a membership based on multiple continents, an organisation such as the WFPI relies heavily on its virtual communication with its members and council via Web site and e-mail communications, respectively. E-mail is crucial to deliver information swiftly to people with varying schedules and in different time zones, and it generates a permanent record that can be reviewed [3].

An organization's e-mail communications are an archive that can be analysed for a variety of data, including message volume, frequency and length of messages, response time and content [2]. The average of 168 e-mails per month averages to 6 per day in a 30-day month (i.e. working on weekends) or 8 per day for a 20-day month (working weekdays only).

Interpreting volume of e-mail

Interpreting our findings is a challenge. Does a category with few communications imply that momentum is flagging or that activity is stable, amply covered elsewhere or too politically sensitive to be further pursued? Categories with large volumes of communication may imply substantial interest and activity, or disagreement or a reticence to commit (or all of these). What do e-mail flurries say about time management? Does pressure increase the flow, reduce the quality? How many e-mails go overlooked? This e-mail volume study shows that 50% of all messages fell into four categories: outreach (23%); education (10%), member organizations (10%) and society meetings involving the WFPI (10%). Outreach communications taken on their own represented double the amount of any other category.

E-mail content, etiquette and style

The main e-mail subcategories included the development of bylaws [4%]; interactions with the ESPR [3%]; the outreach project at the Indira Gandhi Institute for Child's Health [4%]; ultrasound [3%], and matters relating to the reporting software platform [4%]. We have not evaluated the content of e-mails in detail and sensitive issues have been avoided. However, there would be much to gain from examining the volume of e-mails in specific categories if we were able to differentiate the high volume due to proactive group behaviour from that due to conflict-related issues. One paper discussing e-mail communications defines conflict as "two or more people who are interdependent who have incompatible goals" [4]. This scenario is

likely to occur in any organisation and is essential for change to take place—in institutional approach or perception.

Individual approaches to e-mailing also have a significant effect on the quality of communication, e.g., stream of consciousness vs. considered and grouped comments. The diversity of communication scenarios within WFPI reflects the larger dynamics of the group. Although WFPI e-mails requiring priority action are indicated as such upon issue, any e-mail carries an unstated expectation of rapid response [3]. Non-participation in a fast-moving thread can generate the impression of falling behind. But considering the time-zone delays and different national holidays and religious festivals, etiquette needs to be considered in context. Time zone differences become a major challenge for e-mail discussion, whether it involves two individuals or a group. Conversations that would normally take minutes between colleagues in the same time zone may take several days when each reply consumes 12–24 h.

Cultural differences

Cultural differences can increase the potential for misunderstandings [3]. A striking illustration of our cultural differences was evident when one physician misinterpreted the request to wear "several hats" at an important international meeting, thinking this figurative expression was meant literally. There have also been examples of gender confusion, simply because e-mail senders are never seen in person, and erroneous assumptions of nationality for the same reason (the general manager is in France, not the United States!).

The importance of e-mail archives

What does the WFPI communication record tell us about regional participation on the pediatric radiology stage and what are the emerging forces and trends? This type of debate can only take place after data have been collected and categorized. Only then can their contents be analysed and insight applied to identify areas calling for corrective measures. New complex international societies such as the WFPI require ongoing audits of their activity to prove their role, pertinence, international reach and impact. Such an understanding of institutional and group dynamics also assists efforts in fund-raising by indicating where support is likely to be forthcoming. Analysis of e-mail communication is a simple and novel way to begin to understand the society's activities. Such a process will continue to be used to improve institutional performance.

Limitations

Some members communicate privately via alternative addresses or phone calls without copying the general manager. Not all e-mails coming through the hub are archived, the criteria being "does this e-mail impact the organization's development?" Personal and peripheral e-mails (e.g., acknowledgement of receipt) are therefore excluded. Furthermore, not all e-mails sent by the general manager are archived, because responses usually provide the information value and these are archived. Although the initial question appears on the return e-mail, this counts as one e-mail for our study on calculating e-mail volume, as opposed to two. Our results should therefore be considered an under- rather than an over-estimation of e-mail communication volume. It is to be noted that the pilot tele-reading program was performed and managed using e-mail via a different administrator and is not included here, as were the e-mails preparing the WFPI mini symposium for the *Pediatric Radiology* journal.

Conclusion

The WFPI's major communication activity stems from four main categories: outreach, education, member organisations and society meetings. The e-mail volume reflects the society's priorities as defined in its strategic framework and the activities that set it apart from its member and founding societies.

There are many additional questions that this initial research has raised. We must now measure the impact of centralization on smooth functioning and the impact of archives on the production of visibility/accountability tools. We must investigate the reasons traffic is generated and assess whether e-mail is a valuable working tool. We must learn more about the personnel profile WFPI leaders require in terms of e-mail organization skills, language/cultural sensitivity and writing diplomacy, and staff time spent on archiving. Nevertheless, the WFPI, as a virtual organisation, depends on e-mail service for its daily operation and communication between its leaders and members, as well as other organizations around the world. This communication has worked effectively in forming the building blocks necessary to provide children in all corners of the world with child-specific radiologic health care.

**Conflict of interest**  None

References

1. D'Alessandro MP, Galvin JR (1998) SPR online: creating, maintaining, and distributing a virtual professional society on the Internet. Radiographics 18:189–194
2. Sittig DF (2003) Results of a content analysis of electronic messages (email) sent between patients and their physicians. BMC Med Inform Decis Mak 3:11
3. Harolds JA (2012) Communicating in organizations, part IV: e-mails and one-on-one meetings. Clin Nucl Med 37:580–582
4. Olive D (2006) Computer mediated communication: avoiding conflict using e-mail. Pa Nurse 61:19–20