Editing by E-mail in South Africa

The advent of the Internet and the facility of sending messages, manuscripts, graphic images, and any other electronically stored data over this worldwide network of computers has caused a minor revolution in the scientific-publishing world. The case by which a scientific paper can be transmitted from author to editor, to reviewer and back again, makes previous methods of communication archaic and almost obsolete.

In South Africa, it is even more appealing because the postal services have deteriorated mightily since the arrival of the New South Africa, which seems at times bent on self-destruction. The main method of transmission of manuscripts has previously been so-called “snail mail” (post) and occasionally fax. It is more usual for galley proofs and corrected page proofs, not initially submitted manuscripts, to be sent by fax.

What Are the Main Concerns When Sending Manuscripts?

In the table, I have compared the 3 transmission methods and identified what I believe to be the significant areas of anxiety.

Post
Reliability and speed (particularly in South Africa) are questionable. It has taken some postal items 3 weeks to travel 5 miles, and others 3 days to travel 1000 miles. Yet others have been sent and never delivered, or been returned to us 3 months later, damaged beyond repair.

Furthermore, postal charges have, in recent months, escalated by 400% in some cases (overseas mail in particular). Security depends on the integrity of the postal carrier, which currently in South Africa is at best questionable and at worst totally lacking.

Accessibility is ubiquitous. Most people in this field are within reach of a post office.

Technical problems are not an issue.

Fax
This facility has high speed and fairly high reliability in terms of reaching the intended recipient.

A major drawback is cost. The fax machine, while not being an exorbitantly expensive outlay, uses up vast amounts of paper, the heat-sensitive type being extremely costly. In addition, lengthy faxes (10 pages or more) use up telephone time and, unlike in the USA, long-distance and overseas faxes are dreadfully expensive.

Security depends again on the honesty and integrity of the recipient if he or she is not the person to whom the item is addressed.

Accessibility is reasonably high, because most people involved in authoring, reviewing, or editing scientific papers have access to a fax machine.

Technical problems arise with the clarity and legibility of the received document. This depends to a large extent on the resolution power of both the sending and receiving machines. We have on many occasions received manuscripts that are more than 30 pages long containing figures or graphs that are useless because one cannot make out detail.

E-Mail
This method, for a relatively isolated medical community like ours, is heaven-sent. Apart from the features in Table 1, it now affords us the opportunity of approaching international experts for peer review and advice. It puts all our associate editors in easy reach, and it supplies an inexpensive, fast, and reliable method of communication.

One drawback, which is not insurmountable, is conversion of documents from a word-processing package to another, because formatting is often lost. This problem is addressed by a number of software suppliers: Either conversion packages are built into the word processing software, or 3rd-party packages can be easily purchased.

With regard to security, one has to examine the Internet with an objective eye. Millions, maybe even billions of messages are sent over the Internet each day. Of these, many contain confidential information including business reports, financial information, and credit card numbers. One hears

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**Table: Post, fax, and e-mail transmission of scientific papers: comparison of performance characteristics**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Post</th>
<th>Fax</th>
<th>E-mail</th>
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<tbody>
<tr>
<td>Speed</td>
<td>+</td>
<td>+++</td>
<td>+++</td>
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<tr>
<td>Reliability</td>
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<td>+++</td>
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<tr>
<td>Cost</td>
<td>+</td>
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<td>Security</td>
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<tr>
<td>Accessibility</td>
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<td>+</td>
<td>?</td>
</tr>
<tr>
<td>Technical Problems</td>
<td>-</td>
<td>+</td>
<td>++</td>
</tr>
</tbody>
</table>

Level of performance: +++ Highest; -Lowest.

* In South Africa
Security: So What’s the Big Deal?

Security on the Internet is one of those conversations whose term has expired. Yes, there are still reports of piracy of intellectual property and even financial property instigated by hackers and evil doers. However, I am not convinced that any great harm has been done to mankind because of these intrusions on scientific communication.

This insecurity about security reminds me of pioneer days in the American West. Most people stayed in their comfortable homes in Philadelphia, drinking tea out of fine china cups, while a few brave souls rode barefoot over the Great Plains to reach the promised land. There wasn’t much security in walking over Donner Pass, but somebody had to do it. Now we don’t think anything about moving from coast to coast because it is secure.

Where is the security in basic research labs? Colleagues meet and discuss their work. Scientists report their work in progress at meetings, where feedback is solicited. Interim reports are submitted to funding agencies and journals as work in progress. Reports are left in unsecured files and on researchers’ desks. Reports are photocopied and faxed by clerical staff who have no stake in the proprietary nature of the work. The postal workers and express mailers handle the data and manuscript in its various stages. I won’t even mention the breach of confidentiality that happens too often in the review process. Why are these not seen as places of possible insecurity?

Psychologists contend that during the 1st stages of change we are shocked by the news of the change and become fearful. Transmitting manuscripts on the Internet requires a change in the way we think. It is the Federal Express of the 1990s and the pioneers of the 1840s. Oddly enough, many of us want this to work, but we are stuck in the fear stage as we face our 1st big river with our horses and wagon. It’s time to leave the extra baggage behind and figure out how to make this work.

Fred N Sanders
Editor, Continuing Medical Education Journal
Medical Association of South Africa
Pinelands, South Africa

Reference

Vicki Sullivan
Director, Scientific Publishing
American Heart Association
Dallas, Texas