

## Comment

# Let's work together

**Neil Calder**

This paper will outline the very successful initiatives to define common communication strategies amongst the world's high energy physics laboratories. These initiatives have been extremely successful in changing the communication practices of a worldwide community of high energy physics labs and these practices are now expanding to the community of synchrotron radiation laboratories. The payback has been extremely encouraging, with a much higher regard for the importance of communication in senior management and, perhaps coincidentally, major increases in funding of physical sciences in the United States and other countries.

The traditional model was for each laboratory to communicate its news and achievements without any interaction with laboratories doing similar work. This was extremely inefficient and at times destructive. Big science is now, by definition, international, and the lab centered model frequently ignored contributions from other nations and in so doing wasted the opportunity for press coverage and interest in the result in these other countries. Frequently, grave errors of diplomacy were committed where the contribution of scientists not from the home laboratory was ignored, creating mistrust and animosity. In fact, the situation was a definition of disharmony caused by poor communication technique.

We decided to think differently. In December 2001, Judy Jackson, Director of Public Affairs at Fermi National Laboratory, called a meeting in Hamburg, Germany, between the heads of communication of DESY, Germany; Gran Sasso, Italy; Brookhaven, US; SLAC, US; and CERN, Switzerland. At this meeting, the Interactions Collaboration was established. Its goal was to amplify the effectiveness of particle physics communication by pooling resources, experience and good practice. An axiom of this collaboration was to pay full tribute to all scientists, regardless of their home institution, in any press releases or media activities and to encourage all communication offices to promote stories in their own countries regardless of which lab carried out the initial research. By so doing, we instantaneously increased the dissemination of the scientific results. The Interactions Collaboration has expanded exponentially and now every major particle physics lab in the world is an active member. A crucial part of the Interactions Collaboration is the Interactions website, [www.interactions.org](http://www.interactions.org). This site is a one-stop resource for any information, graphics, visuals needed to communicate high energy physics. An independent newswire has also been setup which allows laboratories to send out press releases directly to the world's press. We also keep track of all press and media articles concerned with high energy physics. This site has proved to be immensely popular. There are now nearly 100,000 unique visits each month.

To make such collaborations work effectively human contact and interaction is essential. We soon realized that if our communication was only carried out by email that motivation soon dissipated. The members of Interaction make a major effort to communicate by videoconference and by telephone to maintain the humanity of the collaboration. In addition, we organize a face-to-face meeting, usually two times a year, in one of the member laboratories. These meetings frequently take place in conjunction with major physics conferences. The importance of friendship and social interaction in the success of Interactions should not be underestimated. The Interactions Collaboration has also been successful in persuading the organizers of major conferences to include a plenary talk on communication at each conference. This is a new initiative and has turned out to be very popular.

Many new communication shoots have sprung from the Interactions root. The next major particle physics accelerator is hoped to be the International Linear Collider, a vast and expensive project. Communicators have worked from the inception, with the management of the ILC to build sharing of information into project management from the very start. A specific ILC Communications website has been set up and four communicators representing the three major regions, Asia, Europe and the

Americas, have been hired. Each week, a newsletter covering the progress with the ILC worldwide is sent out via email to a growing member of subscribers.

Grid computing is another international initiative with fascinating and innovative work going on in many countries. Through the Interactions Collaboration we have now set up a web-based news magazine *Science Grid This Week* ([www.interactions.org/sgtw](http://www.interactions.org/sgtw)). This website has been very effective in unifying the Grid community and there are a growing number of subscribers to the web magazine.

During the World Year of Physics 2005, the Interactions Collaboration contributed with a unique project: a physicist's blog. Quantum Diaries ([www.interactions.org/quantumdiaries/](http://www.interactions.org/quantumdiaries/)) allowed 33 physicists, distributed in every region in the world, to write about their professional, social, emotional experiences throughout one year. The site was an immediate success and presented a completely new vision of what it is like to be a research scientist. Some diarists created a fervent following with each posting receiving over 1,000 hits. Such an initiative was only made possible by the base of collaboration and trust which had been set up through the Interactions Collaboration.

The two major particle physics labs in the US, Fermilab and Stanford Linear Accelerator Center, have developed this model to the extent where the two communication offices frequently act as one. They decided to pool their publications budgets, to discontinue their beloved but old fashioned lab publications, and to publish a brand new and new-look magazine. *Symmetry* first appeared in October 2004 and has met with remarkable success, winning many awards. It is jointly published by Fermilab and SLAC but welcomes contributions from other regions outside the US. The idea, again, is to promote the field of particle physics and related fields rather than an individual laboratory. 16,000 print copies are distributed and there is a very successful website [www.symmetrymagazine.org](http://www.symmetrymagazine.org).

The Interaction model has now spread to other sciences, most notably synchrotron radiation research. Lightsources.org ([www.lightsources.org](http://www.lightsources.org)) is a website which contains the same resources, i.e. contacts, newswire, image banks, animation, made available on Interactions.org. There are over 50 synchrotron radiation laboratories and this number is growing rapidly. Already the majority of these labs are contributing members to the Lightsources.org collaboration. An interesting factor in Lightsources.org is that synchrotron radiation research is relatively new and there are no established international bodies which advise the field. In high energy physics there are many occasions on which senior scientists come together to discuss the future goals and strategies for the field, for example, the International Committee for Future Accelerators, the High Energy Physics Advisory Panel, and many more. Lightsources.org is the only body which allows representatives from the different laboratories to speak together as a community and will, I think, engender more formalized collaborations between the different institutes.

What are the difficulties? First and foremost, lack of support from senior management. Those who control the budgets must be convinced of the necessity of communication. Lack of commitment: the communication offices have to be fully committed and be prepared to spend time on these collaborative initiatives. Lack of humanity: reliance on email is a killer. Lack of product: such collaborations have to produce something, whether it be magazines, websites, or other initiatives. The final proof of the usefulness of such collaboration has to be measurable.

Within two years of the setting up of Interactions.org and the other initiatives there has been significant growth in the science budget of nearly every country involved in the collaboration. The US is particularly noticeable with the 2007 budget seeing a 14% increase in physical science spending and a promise of doubling of spending over the next ten years. Is this a coincidence? Of course not!

## Author

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