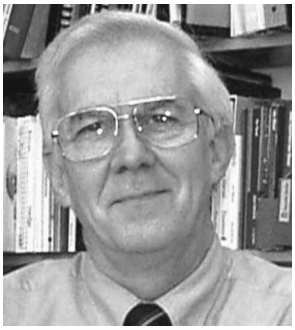

Optics and Terrorism

It seems like ages since this past January's Photonics West in San Jose. Since then a raft of technology companies have closed their doors, the vigorous growth in the telecommunications industry has slowed to a crawl, and the vulnerability of the United States to terrorism has been exposed. In one sense, we are living in a changed world and in another sense, this is the same old world we have always inhabited.

The events of September 11, 2001, will haunt us for years to come. Will we ever get on an airplane or enter a skyscraper without at least a small acknowledgment to our vulnerability in this new world we inhabit? In this passage to this new world, we maintain many of the attitudes and expectations of the old one. To do otherwise would cause disorientation and an inability to function in the course of our daily lives. The phrase that seems to signify our living in the old world is ''getting back to normal,'' whatever ''normal'' was.

I certainly had concerns during the second weekend after September 11, when I traveled with my wife to Baltimore, a place where we had spent five enjoyable years while I was doing my doctoral research at Johns Hopkins. The inspection procedures in the airports were somewhat more stringent than before, but not onerous, by any means. After going out for hard shell crabs on Friday, we visited the National Aquarium the next day and went to Saturday Mass at a church in Little Italy. At the end of Mass, the recessional hymn was ''God Bless America.'' It was sung by the congregation not in any sense of triumph nor in despondence, but as one of hope and affirmation. After a dinner in the neighborhood, we left the restaurant on that Saturday evening and walked back to our hotel amid a lively street scene. That is about as close to normal as we're going to get.

One normal aspect of our lives as optical engineers that could be affected by these horrendous events is our attendance at technical conferences. It would be a shame if the actions of a small group of zealots could diminish the efforts of the scientific and engineering communities at such a promising time in the history of technology. For our part as optical engineers and scientists, this tragedy affects us all. As part of an international community of professionals, some constraints have been imposed on us, either externally by company policies that reduce travel or internally by our reluctance to subject ourselves to air travel with its additional annoyances and perceived risks. It might seem with our modern technology, the need to move people to one place at the end of San Francisco Bay in January could be eliminated.

A virtual conference sponsored by SPIE and presented on the Web might be established. After all, most people do their presentations in PowerPoint these days, so why not just post them on SPIE Web and have some modest registration fee for everyone to come and see? The papers that document the conference would still be assembled and published both as printed texts for libraries and others who need hard copies, and digital copies would be available on the Web, just as they are now. A virtual exhibition would be established for those ''attending'' the conference electronically. The Career Center would come online. What's wrong with this picture?

First, there are no hallways. There are no places to run into a colleague. There are no places to engage in a conversation with several of our colleagues, to make a new acquaintance at a break during a conference session, or to ask questions of a presenter in the presence of others. Perhaps, one could establish of a series of chat rooms tied to the sessions and their presentations, but consider the problems of scheduling time by the participants. What would be lost would be the immediacy of the event. It is hard for the free interchange of ideas to occur when those who would contribute are sitting at their desk in front of their computer.

With a real, as opposed to virtual, conference there is the simplifying fact of geography: you are in the same space at the same time as your colleagues. This permits both the deliberate scheduling of attendance at sessions of interest and the serendipity of chance meetings. And we're a long way from replacing our zigzagging path down the aisles of an exhibition with an equivalent virtual meander. There is some information you can't get over the Internet or from a catalog in the mail.

So, despite the trepidation that we feel, we must proceed to be about our profession, even as we mourn those who died in these tragedies. After all, it is the free exchange of ideas and information that advances our field

and characterizes our society. Our knowledge is also one of the best weapons against the actions of terrorists. It can provide new methods of detecting threats, discriminating and identifying images, and establishing a secure environment. But most important, our international society provides an example to ourselves and to others in the optics and photonics communities and those in other technical disciplines that we can work together to serve this troubled world.

Donald C. O'Shea
Editor

The World Trade Center "Resurrected"

There have been a number of proposals for rebuilding the World Trade Center. For some such an action is one of defiance and resolution. Others have cautioned against such a gesture because of the high cost of the project. They have expressed doubts that private financing could be obtained for the project and that public monies would be harder to come by now. The Port Authority of New York and New Jersey financed the original towers.

However, an interesting approach to acknowledging the absence of these two towers has been proposed by two separate groups. Independently a pair of architects and a pair of artists have developed proposals to project two columns of light into the air above the site. Each column would have about the same breadth as the towers of the World Trade Center. The two groups have combined to produce a design, called ''Towers of Light.'' A site away from the rescue efforts could be established fairly rapidly by using barges in the East River or one of the Manhattan piers in the vicinity. Although the current news reports indicate the planning seems to be for a temporary facility, I think such a majestic use of light should be incorporated into a permanent memorial to those who died that tragic Tuesday.

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